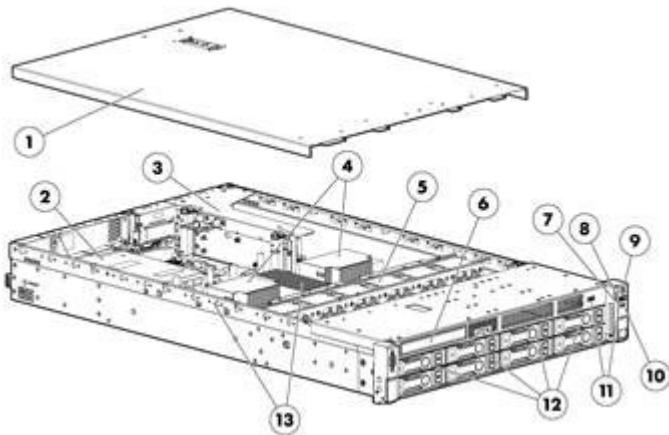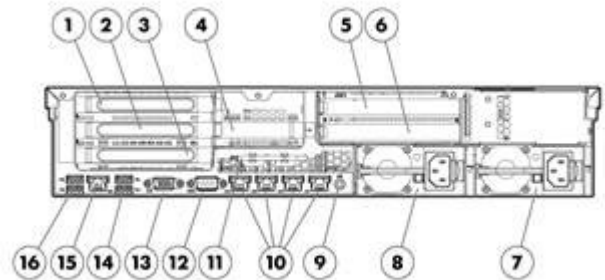## Overview

The HP ProLiant DL380e Gen8 sets the next generation standards of 2U 2-socket rack servers for the industry. With enhanced configuration flexibility, unmatched performance, and leading energy efficient design the DL380e Gen8 offers the perfect solution for the dynamic compute and storage requirements of today's demanding datacenters.

**Front View:**

1. Quick removal access panel
2. Redundant Hot Plug Power Supplies(upgradeable option)
3. Removable Riser Cage assembly
4. Up to 2 Intel E5-2400 Series Processors
5. Removable Hot Plug Fans modules, (optional, full N+1 redundancy)
6. Optical Disk Drive Bay
7. Health LED
8. Network activity LED
9. Power On /Standby button and system power LED button
10. Unit ID LED
11. USB connectors
12. Hard Drive bays
13. 12 DIMM slots: DDR3 Registered(RDIMM), Load Reduced (LRDIMM) or Unbuffered(UDIMM) memory

**Rear View:**

1. Slot1 PCIe3 x8 (4, 1)
2. Slot2 PCIe3 x16 (8, 4, 1)
3. Only for riser board without SAS support: Slot3 PCIe3 x8 (8, 4, 1)
4. Slot4 PCIe2 x8 (4, 1)
5. Slot5 PCIe3 x16 (16, 8, 4, 1) (optional)
6. Slot6 PCIe3 x16 (8, 4, 1) (optional)
7. Power Supply bay1 (Primary Power Supply)
8. Power Supply bay 2 (Shown populated: optional)
9. Unit ID LED/Button
10. HP Ethernet 1Gb 4-port 366i Adapter (4 x 1GbE)
11. Service tool
12. Serial connector
13. Video connector
14. USB connectors (2)
15. iLO connector
16. USB connectors (2)

## Standard Features

**NOTE:** For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

**Processor**
One of the following depending on Model

**Entry Processors - E5-2400v2 series Processors**

**NOTE:** All support up to 1333MHz DDR3 memory speeds.

Intel® Xeon® E5-2407v2(2.4GHz/4-core/10MB/6.4GT/s QPI/80W, DDR3-1333)

Intel® Xeon® E5-2403v2(1.8GHz/4-core/10MB/6.4GTs QPI/80W, DDR3-1333)

**Base Processors - E5-2400v2 series Processors**

**NOTE:** All support up to 1600MHz DDR3 memory speeds.

Intel® Xeon® E5-2430v2(2.5GHz/6-core/15MB/7.2GT/s QPI/80W, DDR3-1600,HT, Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430Lv2(2.4GHz/6-core/15MB/7.2GT/s QPI/60W, DDR3-1600,HT, Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2420v2(2.2GHz/6-core/15MB/7.2GT/s QPI/80W, DDR3-1600,HT, Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2440v2(1.9GHz/8-core/20MB/7.2GT/s QPI/95W, DDR3-1600,HT, Turbo2- 3/3/4/4/5/5) Turbo

**Performance Processors - E5-2400v2 series Processors**

**NOTE:** All support up to 1600MHz DDR3 memory speeds.

Intel® Xeon® E5-2450v2(2.5GHz/8-core/20MB/8.0GT/s QPI/95W, DDR3-1600,HT, Turbo2- 5/5/6/6/7/7/8/8) Turbo +

Intel® Xeon® E5-2470v2(2.4GHz/10-core/25MB/8.0GT/s QPI/95W, DDR3-1600,HT, Turbo2- 5/5/6/6/7/7/8/8) Turbo+

Intel® Xeon® E5-2450Lv2(1.7GHz/10-core/25MB/8.0GT/s QPI/60W, DDR3-1600, HT, Turbo2- 5/5/6/6/7/7/8/8) Turbo+

**Entry Processors - E5-2400 series Processors**

**NOTE:** All support up to 1066MHz DDR3 memory speeds.

Intel® Xeon® E5-2407(2.2GHz/4 -core/10MB/6.4GT-s QPI/80W, DDR3-1066)

Intel® Xeon® E5-2403(1.8GHz/4 -core/10MB/6.4GT-s QPI/80W, DDR3-1066)

**Base Processors - E5-2400 series Processors**

**NOTE:** All support up to 1333MHz DDR3 memory speeds.

Intel® Xeon® E5-2440(2.4GHz/6 -core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430(2.2GHz/6 -core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT,Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2430L(2.0GHz/6 -core/15MB/7.2GT-s QPI/60W, DDR3-1333,HT, Turbo2- 3/3/4/4/5/5) Turbo

Intel® Xeon® E5-2420(1.9GHz/6 -core/15MB/7.2GT/s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Turbo

**Performance Processors - E5-2400 series Processors**

**NOTE:** All support up to 1600MHz DDR3 memory speeds.

Intel® Xeon® E5-2470(2.3GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600,HT, Turbo2- 5/5/6/6/7/7/8/8) Turbo+

## Standard Features

Intel® Xeon® E5-2450(2.1GHz/8 -core/20MB/8.0GT-s QPI/95W, DDR3-1600,HT, Turbo2- 5/5/6/6/7/7/8/8) Turbo+

Intel® Xeon® E5-2450L(1.8GHz/8 -core/20MB/8.0GT-s QPI/70W, DDR3-1600,HT, Turbo2- 2/2/3/3/4/4/5/5) Turbo+

**NOTE:** HT indicates that the processor model supports Intel® Hyper-Threading Technology.
**NOTE:** Turbo2 indicates the maximum potential frequency increment when using Intel® Turbo Boost Technology, with 8, 7, 6, 5, 4, 3, 2 and 1 cores active.
**NOTE:** DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
**NOTE:** Up to 2 processors supported. Mixing different processor models is not supported.
**NOTE:** For the Intel® C600 Chipset E5-2400 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2400x v#, 2 = number of CPUs in a Node, 4 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) = version number.

| | |
|---|---|
| **Cache Memory**<br>One of the following depending on Model | 25MB (1x25MB) Level 3 cache<br>**NOTE:** for ten-core processors.<br><br>20MB (1x20MB) Level 3<br>**NOTE:** For Eight-core processors.<br><br>15MB (1x15MB) Level 3<br>**NOTE:** For Six-core processors.<br><br>10MB (1x10MB) Level 3<br>**NOTE:** For Quad-core processors.<br><br>**NOTE:** All processor models above list the L3 Cache associated with that particular processor. |
| **Chipset**<br>One of the following depending on Model | Intel® C600 Series Chipset<br>Intel® E5-2400 Processor Family<br>Intel® E5-2400v2 Processor Family<br>**NOTE:** For more information regarding Intel chipsets, please see the following URL:<br>http://www.intel.com/products/server/chipsets/. |
| **Upgradeability**<br>One of the following depending on Model | Upgradeable to two processors (20 cores)<br>**NOTE:** Processor upgrade available from Intel® Xeon® Processors E5-2400 to E5-2400 v2. Please contact HP Technology Sales (http://www.hp.com/support), your local HP Re-seller, or reference the following Customer Advisory: ProLiant Servers-Instructions for Upgrading an HP ProLiant Gen8 Server from an Intel Xeon Processor E5-2400 to an Intel Xeon Processor E5-2400v2, regarding critical details before upgrading. An explanation of requirements and limitations are provided. |
| **On System Management Chipset**<br>One of the following depending on Model | HP iLO (Firmware: HP iLO 4)<br><br>**NOTE:** For more information, visit: http://www.hp.com/go/ilo |

## Standard Features

| | | |
|---|---|---|
| **Memory Protection** <br> One of the following depending on Model | Advanced ECC <br> Online Spare <br> Lock-step mode | |

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**Memory**
One of the following depending on Model

| | |
|---|---|
| Type | HP SmartMemory |
| | DDR3 Load Reduced (LRDIMM), Registered (RDIMM) or Unbuffered (UDIMM) |
| Maximum Capacity (LRDIMM) | 384GB (12 x 32GB LRDIMM @1333MHz) |
| Maximum Capacity (RDIMM) | 192GB (12 x 16GB RDIMM @1600MHz or 1333MHz) |
| Maximum Capacity (UDIMM) | 96GB (12 x 8GB UDIMM @1333MHz) |

**NOTE:** HP memory from previous generation servers are not fully compatible with the HP ProLiant DL380e Gen8 Server.
**NOTE:** To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html
**NOTE:** If only one processor is installed, only half the DIMM slots are available
**NOTE:** UDIMM max DIMM population is 12
**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 1600MHz, 1333MHz, or 1066MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: www.hp.com/go/ddr3memory-configurator.

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**Network Controller**
One of the following depending on Model

The HP ProLiant DL380e Gen8 server offers the customer a quad-port NIC standard with the option to upgrade with a variety of networking options.

HP Ethernet 1Gb 4-port 366i Adapter

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## Expansion Slots

| Primary Riser (Standard) | Expansion Slots # | Technology | Bus Width** | Connector Width | Form Factor | Notes |
|---|---|---|---|---|---|---|
| | 1 | PCIe 3.0 | X4 | X8 | Full Length, Full Height Slot | |
| | 2 | PCIe 3.0 | X8 | X16 | Half Length, Full Height Slot | |
| | 3 | PCIe 3.0 | X8 | X8 | Half Length, Full Height Slot | |
| | 4 | PCIe 2.0 | X4 | X8 | Low Profile | |

** Indicates the number of physical electrical lanes running to the connector.

| Primary Riser (Riser with SAS) | Expansion Slots # | Technology | Bus Width** | Connector Width | Form Factor | Notes |
|---|---|---|---|---|---|---|
| | 1 | PCIe 3.0 | X4 | X8 | Full Length, Full Height Slot | |

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## Standard Features

| | | | | | |
|---|---|---|---|---|---|
| 2 | PCIe 3.0 | X8 | X16 | Half Length, Full Height Slot | |
| 3 | PCIe 3.0 | NA | NA | NA | Not available for Riser with SAS |
| 4 | PCIe 2.0 | X4 | X8 | Low Profile | |

** Indicates the number of physical electrical lanes running to the connector.
**NOTE:** This riser kit comes with B320i Smart Array controller which provides support for up to 8 SAS or SATA drives and requires a SAS license key to support SAS drives.

| Secondary Riser (Optional) | Expansion Slots # | Technology | Bus Width** | Connector Width | Form Factor | Notes |
|---|---|---|---|---|---|---|
| | 5 | PCIe 3.0 | X16 | X16 | Full length, full height slot | |
| | 6 | PCIe 3.0 | X8 | X16 | Half length, full height slot | |

** Indicates the number of physical electrical lanes running to the connector.
**NOTE:** When populating slots on secondary riser (p/n 661628-B21), a second processor must be installed.
**NOTE:** Slot 5 supports up to 225w PCIe cards. An additional Graphic Card Power Adapter Kit is required (663282-B21). See Option Section below for offering.
**NOTE:** Adding the rear drive cage negates the space required for secondary optional riser slots 5 & 6.

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**HP Server ROM**

HP ROM (Read Only Memory) is now digitally signed using HP's Corporate Signing Service. This signature is verified before the flash process starts, reducing accidental programming and preventing malicious efforts to corrupt system ROM.

HP ROM provides for essential initialization and validation of hardware components before control is passed to the customer-installed operating system. The ROM also provides the capability of booting from various fixed media (HDD, CD-ROM) and removable media (USB), to continue operation to the operating system.

HP ROM performs very early configuration of the video controller, to allow monitoring of initialization progress via an attached monitor. If configuration or hardware errors are discovered during this early phase of hardware initialization, suitable messages are now displayed on the connected monitor. Additionally, these configuration or hardware errors are logged to the Integrated Management Log (IML) to assist in diagnosis.

HP's ProLiant ROM is used to configure the following:

- Processor and chipset status registers
- System memory, memory map, and memory initialization
- System hardware configuration (Integrated PCI devices and optional PCIe cards).
- Customer-specific BIOS configuration (using the HP ROM-Based Setup Utility (RBSU).

**NOTE:** For further information, please refer to HP's RBSU (ROM based setup utility) user guide: www.hp.com/support/rbsu.

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# QuickSpecs

HP ProLiant DL380e Generation 8 (Gen8)

## Standard Features

| **Storage Controller** One of the following depending on Model | Entry Model – SATA | HP Dynamic Smart Array B120i Controller **NOTE:** Provides support for up to 6 SATA drives and data transmission speeds up to 3Gb/s |
|---|---|---|
| | Entry Model – SAS | HP Dynamic Smart Array B320i/512MB FBWC Controller **NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| | Base Models – LFF | HP Dynamic Smart Array B320i/512MB FBWC Controller **NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS mode. |
| | Base Model – SFF | HP Dynamic Smart Array B320i/512MB FBWC Controller **NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| | High Performance Models | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) |
| | Storage Models – LFF | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) |
| | Storage Models – SFF | HP Smart Array P420/2GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) |

| **Internal Storage Devices** One of the following depending on Model | Diskette Drive | None |
|---|---|---|
| | Optical Drive | Optional DVD-ROM, DVD-RW **NOTE:** This option available with all 8SFF or 8LFF drive bay models. |
| | Hard Drives | None ship standard |
| | Drive Bays | 8 SFF drive bays total with Optical Bay Optional: +8SFF drive bay (total of 16SFF drive bays) **NOTE:** The Optical Drive bay is not available with +8SFF drive bay optional upgrade. |
| | | 8 LFF drive bays total with Optical Bay |
| | | 12 LFF drive bays total without Optical Bay Optional: +2 Rear Drive Bays (LFF or SFF) |
| | | 25 SFF drive bays total without Optical Bay Optional: +2 Rear Drive Bays (LFF or SFF) **NOTE:** Drive cage changes are not supported except for adding +8SFF to an existing 8SFF drive cage. **NOTE:** Adding the rear drive cage negates the space required for secondary optional riser slots 5 & 6. **NOTE:** All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HP SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HP LFF Gen8 Hard Drive Blank Kit. These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server. |

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## Standard Features

| | | | |
|---|---|---|---|
| **Maximum Internal Storage**<br>One of the following depending on Model | Hot Plug SFF SAS | 32.4TB | 27 x 1.2TB (with 25SFF drive cage + Rear 2SFF drive cage) |
| | Hot Plug SFF SATA | 27.0TB | 27 x 1TB (with 25SFF drive cage + Rear 2SFF drive cage) |
| | Hot Plug LFF SAS | 56.0TB | 14 x 4TB (with 12LFF drive cage + Rear 2LFF drive cage) |
| | Hot Plug LFF SATA | 56.0TB | 14 x 4TB (with 12LFF drive cage + Rear 2LFF drive cage) |
| | Hot Plug SFF SAS SSD | 21.6TB | 27 x 800GB (with 25SFF drive cage + Rear 2SFF drive cage) |
| | Hot Plug SFF SATA SSD | 21.6TB | 27 x 800GB (with 25SFF drive cage + Rear 2SFF drive cage) |
| | Hot Plug LFF SATA SSD | 11.2TB | 14 x 800GB (with 12LFF drive cage + Rear 2LFF drive cage) |

| | | |
|---|---|---|
| **Interfaces** | Serial | 1 |
| | Video | 2 (1 front, 1 back) not active simultaneously |
| | LOM Network Ports | 4x1GbE ports |
| | HP iLO Remote Management Network Port | 1 Gb Dedicated |
| | SD slot | 1 Internal Secure<br>**NOTE:** The SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered. |
| | USB 2.0 Ports | Up to 7 total: up to 2 front, 4 back, 1 internal (secure)<br>**NOTE:** 12LFF and 25SFF drive cage models have 1front, 4 back and 1 internal USB ports. |

| | |
|---|---|
| **Industry Standard Compliance** | ACPI 2.0b Compliant<br>PCIe 3.0 Compliant<br>PXE Support<br>WOL Support<br>Microsoft® Logo certifications<br>USB 2.0 Compliant |

| | |
|---|---|
| **Server Power Cords**<br>One of the following depending on Model | High voltage power cord ships standard with all part numbers.<br>**NOTE:** HP ProLiant DL servers no longer ship standard with a 12-foot NEMA 5-15P to C13 power cord that connects to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to power distribution units (PDUs) in data center racks and now ship standard with a PDU 6-foot C-14 to C13 power cord (A0K02A). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the 6-foot NEMA 5-15 to C13 power cord must be ordered separately (AF556A). See Power Cords section for Power Cord options. |

## Standard Features

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|---|---|
| **Power Specifications** | To review typical system power ratings use the HP Power Advisor which is available via the online tool located at URL: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor.

**NOTE:** Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html |

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|---|---|
| **Common Slot Power Supply** | **NOTE:** Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

HP's Common Slot (CS) power supplies allow for commonality of power supplies across a wide range of ProLiant and Integrity servers, as well as HP Storage solutions, and are designed to provide the highest power supply efficiency without degrading system performance. HP CS power supplies are tested by the Electric Power Research Institute (EPRI) and certified through the ECOS 80 Plus power supply program. HP CS power supply options provide efficiency ratings of up to 96% (Titanium) and are available in three power output options - 460W, 750W, and 1200W - allowing the customer to "right-size" a power supply for their specific server configuration. All HP Common Slot power sources are UL, CE Mark Compliant, hot-plug and support redundant configurations.

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted you will get errors and operation will fail.

HP CS Platinum Plus and Titanium power supplies are required when enabling HP's Intelligent Power Discovery (IPD) solution. IPD is the first technology to create an automated, energy-aware network between IT systems and facilities. This allows your company to reclaim millions of dollars in wasted power capacity and downtime costs across data centers. For more information on HP's IPD solution, go to www.hp.com/go/ipd.
It is highly recommended that you use the HP Power Advisor in defining the "Right-Size" power supply for your needs. HP Power Advisor can be accessed at: www.hp.com/go/hppoweradvisor.

**NOTE:** The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 Plus independently tests power supply efficiency and publicly posts the results on www.80Plus.org.

Redundant Power: Optional (1+ 1) power supplies can be purchased through power supply option kits (see Power Supplies for part numbers).

**NOTE:** Power Specification and Technical Content for supported power supplies can be found at: http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html |

## Standard Features

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|---|---|
| **System Fans**<br>One of the following depending on Model | (4) Hot-Plug Non-redundant Fans ship standard in 1P Models<br><br>• 1P: 4 fans - non-redundancy<br>• 1P: 5 fans - redundancy<br><br>(6) Hot-plug Redundant Fans ship standard in 2P Models<br><br>• 2P: 5 fans - non-redundancy<br>• 2P: 6 fans - redundancy<br><br>**NOTE:** Customers may separately purchase redundant fans with the 667855-B21 option kit. Additional fan to support redundancy are also included in -B21 processor option kits when upgrading from one processor to two processors. |
| **Required Cabling** | For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl380e-gen8. |
| **Operating Systems and Virtualization Software Support for ProLiant Servers** | Microsoft Windows Server<br>Red Hat Enterprise Linux (RHEL)<br>SUSE Linux Enterprise Server (SLES)<br>Oracle Solaris<br>VMware<br><br>**NOTE:** For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: http://www.hp.com/go/ossupport and our driver download page http://www.hp.com/support/DL380eGen8 |
| **Graphics** | Integrated Matrox G200 video standard<br><br>• 1280 x 1024 (32 bpp)<br>• 1920 x 1200 (16 bpp) |
| **Form Factor**<br>One of the following depending on Model | 2U Rack form factor<br>Entry models ship with fixed rails.<br>All other models ship with sliding rails and cable management system.<br>8 SFF Drive Bay Version:<br>3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length<br>8 LFF Drive Bay Version:<br>3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length<br>12 LFF Drive Bay Version:<br>3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length<br>25 SFF Drive Bay Version:<br>3.44 (8.75 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length |

# QuickSpecs

## Standard Features

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|---|---|---|
| **On System Management** | HP iLO Management Engine | HP iLO Management Engine is a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. HP iLO Management Engine comes standard on all HP ProLiant Gen8 servers. The HP iLO Management Engine portfolio includes: |

- **HP iLO:** The HP iLO (Integrated Lights-Out) management processor is the core foundation for the HP iLO Management Engine
- **HP Agentless Management:** Provides built in server health monitoring and alerting capability without OS agents, that starts working the moment a power cord and an Ethernet cable are connected.
- **HP Active Health System:** Always on, continuous monitoring for increased stability and shorter downtimes; 100% configuration history; Health and service alerts and easy export and upload to Service and Support.
- **HP Intelligent Provisioning:** Lets customers provision and configure a single server without any separate media. No more SmartStart CDs or Smart Update Firmware DVD are needed.
  - To start Intelligent Provisioning:
    - Press the F10 key during the ProLiant Gen8 server boot process (also known as power on self-test or POST).
    - Please go to the Intelligent Provisioning website at www.hp.com/go/intelligentprovisioning for additional information and to view usage videos.
    - Use the Service Pack for ProLiant (SPP) at www.hp.com/go/spp to get firmware and software updates.
- **HP iLO Mobile App:** Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: www.hp.com/go/ilo/mobileapp

**NOTE:** For more information, visit: http://www.hp.com/go/ilo or HP iLO Management Engine technologies whitepaper

| | |
|---|---|
| **Security** | Power-on password |
| | Serial interface control |
| | Administrator's password |

## Standard Features

**Warranty**

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**NOTE:** Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

# QuickSpecs

## Optional Features

| | | |
|---|---|---|
| **HP Insight Management** | HP Insight Control | HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. HP Insight Control also supports Location and Power Discovery Services to automate many configuration, asset tracking, and power management tasks to speed implementation and prevent downtime. For more information, see http://www.hp.com/go/insightcontrol.<br><br>HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, see: http://www.hp.com/services/insight. |
| | HP iLO Essentials | HP iLO Essentials license ideal for small and medium business customers. The specially created HP iLO Essentials (a subset of iLO Advanced functionality) saves SMB customers time and money, by ease of remote server set up through the interactive virtual media, lowering operational costs with remote access via the Integrated Remote Console, and faster time to resolution with email-based proactive notifications. With this newly designed HP iLO Essentials license SMB customers now have the option of a server management package solely design and priced just right for their IT environments. HP iLO Essentials is available on all HP ProLiant Gen8 e-series making this an ideal solution for small business owners. For more information, see: http://www.hp.com/go/iLO/essentials |
| | HP iLO Advanced | HP Integrated Lights-Out Advanced License a product option, providing smart remote server management without compromise. iLO Advanced unlocks the full set of remote administration functionality for all HP ProLiant servers by activating the full Virtual Keyboard Video and Mouse remote console, multi-user collaboration, console record and replay, GUI-based and scripted virtual media and virtual folders, and enhanced security and power management functionality. For more information, see: http://www.hp.com/go/iloadvance |
| | HP Matrix Operating Environment | The HP Matrix Operating Environment (Matrix OE) for ProLiant and Integrity servers is an integrated command center that helps you instantly adjust to dynamic business demands. This advanced infrastructure management software lets you reduce the cost of common data center tasks by up to 40 percent while keeping pace with your changing business.<br><br>The HP Matrix OE includes the automated provisioning, optimization, and recovery management capabilities for HP CloudSystem Matrix, the ideal platform for private cloud and Infrastructure as a Service (IaaS).<br><br>**NOTE:** For more information, visit: http://www.hp.com/go/matrixoe |
| **High Performance Clusters** | HP Cluster Platforms | HP Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters |

## Optional Features

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|---|---|
| HP HPC Interconnects | High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools.<br>http://www.hp.com/techservers/clusters/ucp/index.html |
| HP Insight Cluster Management Utility | HP Insight Cluster Management Utility (CMU) is an HP-licensed and HP-supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective.<br>http://www.hp.com/go/cmu |

**Storage Software**

Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HP storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities.

Storage software that gets the job done:

- **Data Protection and Recovery Software**
  Whether you're a large enterprise or a smaller business, HP data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  HP's storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- **Storage Resource Management Software (SRM)**
  HP's storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.
- **Data Replication Software**
  HP offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in HP storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HP StoreVirtual VSA**
  With HP StoreVirtual VSA you can use the power of virtualization to turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.

**NOTE:** For more information available Storage Software including QuickSpecs, please see: www.hp.com/go/storage/software.

## Optional Features

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|---|---|
| **HP Insight Online** | HP Insight Online is a new addition to the HP Support Center for one stop, secure access to product and HP support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HP Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. www.hp.com/go/insightonline |
| **HPC Interconnects** | **NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HP Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand Interconnects: http://www.hp.com/techservers/clusters/ucp/index.html |
| | **InfiniBand**      PCI-Express Generation 2 adapters |
| **Factory Express Portfolio for Servers and Storage** | HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. |
| | Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, EVA7xxx, EVA, XP, rackable tape libraries and configurable network switches. |
| | For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express. |
| **HP Proactive Insight experience** | Prevent problems with innovative, automated monitoring tools and proactive services. The HP Proactive Insight experience consists of using Insight Online, Insight Remote Support, and Proactive Care Support Service as one integrated solution. The Proactive Insight experience provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: www.hp.com/go/proactiveinsightexperience |
| **HP Simple Configurator** | SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact HP's Customer Business Center or an Authorized Partner for assistance. http://www.hp.com/products/configurator |

## Service and Support

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| **Service and Support** | **HP Technology Services for Industry Standard Servers and BladeSystem**<br>Capitalizing on HP ProLiant server and HP BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.<br><br>**What HP ProLiant and BladeSystem Services can do for you**<br>HP ProLiant and BladeSystem Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. This way, HP proposes services solutions that include more than just uplift of base warranty. Foundation Care services deliver scalable support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for their business needs. New to this portfolio is HP Collaborative Support. If you are running business critical environments, HP offers Proactive Care or Critical Advantage. These services help deliver high levels of application availability through proactive service management and advanced technical response<br>You can get the support you need by choosing from one of a number of service packaged solutions we have designed to address wider set of customer support needs.<br><br>HP Technology Services meets business challenges with services offered in three support recommendations - **Optimized Care, Standard Care, and Basic Care** - available for each product group. Such support solutions enable customers to optimize technology operations, minimize risk and drive better business outcomes with easy-to-buy, easy-to-use scalable support recommendations for servers, storage, networking and software designed to meet your specific needs.<br><br>All three service recommendations include support services from the broader portfolio of Foundation Care and Proactive Care services. |
| **Optimized Care** | **Optimized Care: Supports maintaining servers at optimum performance availability**<br><br>**HP ProLiant Server Hardware Installation**<br>Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner<br>http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf<br><br>**HP Installation and Startup for Insight Control Software / HP SIM**<br>Provides for the deployment and basic configuration of HP Insight Control or HP SIM (Systems Insight Manager) on HP ProLiant ML and DL series servers or HP BladeSystem servers<br>http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf<br><br>**3-Year HP 24x7 4 hour Response, Proactive Care**<br>Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your call and end to end until resolved, delivering a single point of contact for you. Helping you to resolve your hardware and software issues and minimizing downtime in your business critical environment.<br><br>**Additional Services:** Factory Express, Education Services, Proactive Select - 30 Credit Package |

## Service and Support

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| **Standard Care** | **Standard Care: Service recommendation that maintains high level of server availability** |

**HP ProLiant Server Hardware Installation**
Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner
http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

**HP Installation and Startup for Insight Control Software / HP SIM**
Provides for the deployment and basic configuration of HP Insight Control or HP SIM (Systems Insight Manager) on HP ProLiant ML and DL series servers or HP BladeSystem servers
http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf

**3-Year HP 24x7 4 hour Response, Collaborative Support**
Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problemdiagnosis, fault isolation, and resolution if available to HP. If the problem is with HP HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

**Additional Services:** Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware) Installation & Start Up and Software Support; Microsoft or Linux or VMware education courses; +60 Proactive Select Credits

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| **Basic Care** | **Basic Care: delivers minimum recommended support service level** |

**HP ProLiant Server Hardware Installation**
Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner
http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

**3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service**
Provides you with rapid remote support and if required an HP authorized technical engineer will be on site 24X7 begin hardware maintenance service within 4 hours of the service request being logged
http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE.pdf

**Additional Services:** Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware) Installation & Start Up and Software Support; +30 Proactive Select Credits, Factory Express.

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| **Insight Remote Support** | Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more http://www.hp.com/go/insightremotesupport |

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## Service and Support

**HP Support Center**

Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources or collaborate with peers. Learn more http://www.hp.com/go/hpsc

HP's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.
HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack or HP contractual support agreement.

*HP' Support Center Mobile App is subject to local availability

**Warranty / Service Coverage**

For ProLiant servers and storage systems, the services cover HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

**For more information**

To learn more on HP ProLiant servers and HP BladeSystem servers, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant

## Pre-configured Models

**NOTE:** For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

**NOTE:** Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

**NOTE:** HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

**NOTE:** If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

**NOTE:** All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HP SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HP LFF Gen8 Hard Drive Blank Kit.

**NOTE:** When the SAS-enabled riser board with the Smart Array B320i controller is installed in the server, the embedded Smart Array B120i controller is automatically disabled. In the absence of another storage controller or an expander backplane, front drives operate in AHCI or Legacy mode. In these two modes, the drives are not part of a hardware RAID or a member of a logical drive. The Locate, Drive status, and Do not remove LEDs in the drive carrier are disabled.

## Entry Models - SATA

| **HP ProLiant DL380e Gen8 E5-2403v2 4GB-R B120i Hot Plug SATA 4 LFF 460W PS Server** 747766-001 | | |
|---|---|---|
| | **Processor** | (1) Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W, DDR3-1333) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 4GB (1x4GB) DDR3 Registered DIMMs PC3-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B120i Controller **NOTE:** Provides support for up to 6 SATA drives and data transmission speeds up to 3Gb/s Greater than 4 drives requires an additional cable (see p/n 675856-B21) |
| | **Hard Drive** | None ship standard; includes 7 LFF hard drive blanks **NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 LFF HDD Bays **NOTE:** This model comes with 8LFF Chassis. |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans **NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| | **Form Factor** | Rack (2U) **NOTE:** Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). **Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Pre-configured Models

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2403 1P 4GB-R Hot Plug 4 LFF 460W PS Entry Server**<br>648255-001 | **Processor** | (1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 4GB (1 x 4GB) Registered DIMMs PC3-10600R (1333MHz)<br>**NOTE:** Memory runs at 1066MHz speed due to processor. |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B120i Controller<br>**NOTE:** Provides support for up to 6 SATA drives and data transmission speeds up to 3Gb/s Greater than 4 drives requires an additional cable (see p/n 675856-B21) |
| | **Hard Drive** | None ship standard; includes 7 LFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 LFF HDD Bays<br>**NOTE:** This model comes with 8LFF Chassis. |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans<br>NOTE: Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| | **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001).<br>**Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Entry Models - SAS

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2403 1P 4GB-R Hot Plug 8 SFF 460W PS Entry Server**<br>648256-001 | **Processor** | (1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 4GB (1 x 4GB) Registered DIMMs PC3L-10600R (1333MHz)<br>**NOTE:** Memory runs at 1066MHz speed due to processor. |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B320i Controller<br>**NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| | **Hard Drive** | None ship standard; includes 7 SFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 SFF HDD Bays |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |

## Pre-configured Models

| | |
|---|---|
| **Fans** | 4 Hot-Plug Non-redundant Fans<br>**NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 non-telescoping Friction Rail Kit which does not allow for in rack serviceability. The HP 1U Gen8 Cable Management Arm is not available when using Friction Rails. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Base Models - LFF

**HP ProLiant DL380e Gen8 E5-2407v2 8GB-R B320i Hot Plug SAS 8 LFF 460W PS Server**
747767-001

| | |
|---|---|
| **Processor** | (1) Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1333) Processor |
| **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| **Memory** | 8GB (1 x 8GB DDR3-1600MHZ RDIMMs)<br>**NOTE:** Memory runs at 1333MHz speed due to processor. |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Dynamic Smart Array B320i/512 MB FBWC Controller<br>**NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS mode. |
| **Hard Drive** | None ship standard; includes 7 LFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| **Internal Storage** | 8 LFF HDD Bays |
| **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| **Fans** | 4 Hot-Plug Non-redundant Fans<br>**NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

# QuickSpecs

## Pre-configured Models

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2407 1P 8GB-R Hot Plug 8 LFF 460W PS Base Server**<br>668665-001 | **Processor** | Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 8GB (2 x 4GB) Registered DIMMs PC3L-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B320i/512MB FBWC Controller<br>**NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS mode. |
| | **Hard Drive** | None ship standard; includes 7 LFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 LFF HDD Bays |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans<br>**NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| | **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Base Models - SFF

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2407v2 8GB-R B320i Hot Plug SAS 8 SFF 460W PS Server**<br>747768-001 | **Processor** | (1) Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1333) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 8GB (1 x 8GB DDR3-1600MHZ RDIMMs)<br>**NOTE:** Memory runs at 1333MHz speed due to processor. |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B320i/512MB FBWC Controller<br>**NOTE:** Provides support for up to 8 SATA drives, data transmission speeds up to 6Gb/s and requires purchase of SAS license key for SAS mode. |
| | **Hard Drive** | None ship standard; includes 7 SFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 SFF HDD Bays |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans<br>**NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |

## Pre-configured Models

| | | |
|---|---|---|
| | **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2407 1P 8GB-R Hot Plug 8 SFF 460W PS Base Server**<br>668666-001 | **Processor** | (1) ) Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 8GB (2 x 4GB) Registered DIMMs PC3L-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B320i/512MB FBWC Controller<br>**NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| | **Hard Drive** | None ship standard; includes 7 SFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 SFF HDD Bays |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans<br>**NOTE:** Customers can upgrade to a redundant fan configuration with the purchase of an option kit (see p/n 667855-B21) |
| | **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001).<br>**Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

Pre-configured Models

## High Performance Models

**HP ProLiant DL380e Gen8 E5-2450v2 24GB-R Hot Plug SAS/SATA 8 SFF 750W RPS Server**
747771-001

| | |
|---|---|
| **Processor** | (2) Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/8.0GT-s QPI/95W, DDR3-1600) Processor |
| **Cache Memory** | 20MB (1x20MB) Level 3 |
| **Memory** | 24GB (3 x 8GB) Registered DIMMs PC3L-12800R (1600MHz) |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0+6/6+0)<br>**NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| **Hard Drive** | None ship standard; includes 7 SFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| **Internal Storage** | 8 SFF HDD Bays |
| **Power Supply** | (2) HP 460W CS Gold Plus Hot Plug Power Supplies (92% Efficient) |
| **Fans** | 6 Hot-plug Redundant Fans |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping 8SFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

**HP ProLiant DL380e Gen8 E5-2450 2P 24GB-R P420 Hot Plug 8 SFF 750W PS Perf Svr**
668669-001

| | |
|---|---|
| **Processor** | (2) Intel® Xeon® E5-2450 (2.1GHz/8-core/20MB/8GT-s QPI/95W, DDR3-1600, 5/5/6/6/7/7/8/8) Processors |
| **Cache Memory** | 20MB (1x20MB) Level 3 |
| **Memory** | 24GB (6 x 4GB) Registered DIMMs PC3L-10600R (1333MHz) |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0)<br>**NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| **Hard Drive** | None ship standard; includes 7 SFF hard drive blanks<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| **Internal Storage** | 8 SFF HDD Bays |
| **Power Supply** | (2) HP 460W CS Gold Plus Hot Plug Power Supplies (92% Efficient) |
| **Fans** | 6 Hot-plug Redundant Fans |
| **Energy Star** | Meets Energy Star requirements |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping 8SFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your |

## Pre-configured Models

| | |
|---|---|
| | local services representative (p/n 695539-001).<br>**Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Storage Models - LFF

**HP ProLiant DL380e Gen8 E5-2420v2 12GB-R Hot Plug SAS/SATA 12 LFF 750W PS Server**
747769-001

| | |
|---|---|
| **Processor** | (1) Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600) Processor |
| **Cache Memory** | 15MB (1 x 15MB) L3 cache |
| **Memory** | 12GB (3 x 4GB) Registered DIMMs PC3L-12800R (1600MHz) |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0)<br>**NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| **Hard Drive** | None ship standard; includes 11 LFF hard drive blanks<br>**NOTE:** This model comes with 11 HDD blanks if no HDD is ordered. |
| **Internal Storage** | 12 LFF HDD Bays |
| **Power Supply** | (1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient) |
| **Fans** | 4 Hot-Plug Non-redundant Fans |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001).<br>**Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Pre-configured Models

| HP ProLiant DL380e Gen8 E5-2420 1P 12GB-R P420 Hot Plug 12 LFF 750W PS Server 668667-001 | | |
|---|---|---|
| | **Processor** | (1) Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, 3/3/4/4/5/5) Processor |
| | **Cache Memory** | 15MB (1x15MB) Level 3 |
| | **Memory** | 12GB (3 x 4GB) Registered DIMMs PC3L-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Smart Array P420/1GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) **NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| | **Hard Drive** | None ship standard; includes 11 LFF hard drive blanks **NOTE:** This model comes with 11 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 12 LFF HDD Bays |
| | **Power Supply** | (1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans |
| | **Form Factor** | Rack (2U) **NOTE:** Includes Rack Mounting Gen8 telescoping LFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). **Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Storage Models - SFF

| HP ProLiant DL380e Gen8 E5-2420v2 12GB-R Hot Plug SAS/SATA 25 SFF 750W PS Server 747770-001 | | |
|---|---|---|
| | **Processor** | (1) Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/7.2GT-s QPI/80W, DDR3-1600) Processor |
| | **Cache Memory** | 15MB (1 x 15MB) L3 cache |
| | **Memory** | 12GB (3 x 4GB) Registered DIMMs PC3L-12800R (1600MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Smart Array P420/2GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) **NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| | **Hard Drive** | None ship standard; includes 24 SFF hard drive blanks **NOTE:** This model comes with 24 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 25 SFF HDD Bays |
| | **Power Supply** | (1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans |
| | **Form Factor** | Rack (2U) **NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). |

## Pre-configured Models

| | | |
|---|---|---|
| | | **Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2420 1P 12GB-R P420 Hot Plug 25 SFF 750W PS Server** <br> 668668-001 | **Processor** | (1) Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5) Turbo Processor |
| | **Cache Memory** | 15MB (1 x 15MB) L3 cache |
| | **Memory** | 12GB (3 x 4GB) Registered DIMMs PC3L-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Smart Array P420/2GB FBWC Controller (RAID 0/1/1+0/5/5+0/6/6+0) <br> **NOTE:** This controller would be installed on the standard riser card or the optional secondary riser card. |
| | **Hard Drive** | None ship standard; includes 24 SFF hard drive blanks <br> **NOTE:** This model comes with 24 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 25 SFF HDD Bays |
| | **Power Supply** | (1) HP 750W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans |
| | **Form Factor** | Rack (2U) <br> **NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). <br> **Caution:** HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Smart Buys

**HP ProLiant DL380e Gen8 E5-2403 1P 2GB-U Hot Plug 8 LFF 460W PS Server/S-Buy**
716676-S01

| | |
|---|---|
| **Processor(s)** | (1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066, HT) |
| **Cache Memory** | 10MB (1x10MB) Level 3 |
| **Memory** | 2GB (1x2GB) Unbuffered DIMMs PC3L-10600E |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Dynamic Smart Array B120i Controller |
| **Hard Drive** | None ship standard |
| **Internal Storage** | 8 LFF HDD Bays |
| **Optical Drive Bay** | 1; (Optional: DVD-ROM, DVD-RW) |
| **PCI-Express Slots** | 4 standard (1-FL/FH, 2HL/FH, 1-LP) |
| **Power Supply** | HP 460W CS Gold Hot Plug Power Supply |
| **Fans** | 4 Hot-Plug Non-Redundant Fans |
| **Management** | HP iLO Management Engine (standard) |
| **Form Factor** | Rack (2U)<br>**NOTE:** Rail kit not included; please select part number 663480-B21: HP 2U LFF Ball Bearing Rail Kit |
| **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labour, 1-Year Onsite support with next business day response. |

**HP ProLiant DL380e Gen8 E5-2403 1P 8GB-R Hot Plug 8 SFF 2x460W PS Server/S-Buy**
686202-S01

| | |
|---|---|
| **Processor(s)** | (1) Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/6.4GT-s QPI/80W, DDR3-1066, HT) |
| **Cache Memory** | 10MB (1x10MB) Level 3 |
| **Memory** | 8GB (1 x 8GB) Registered DIMMs PC3-10600R (1333MHz) |
| **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| **Storage Controller** | HP Dynamic Smart Array B320i/ZM Controller<br>**NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| **Hard Drive** | None ship standard<br>**NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| **Internal Storage** | 8 SFF HDD Bays |
| **Optical Drive Bay** | 1; (Optional: DVD-ROM, DVD-RW) |
| **PCI-Express Slots** | 4 standard (1-FL/FH, 2HL/FH, 1-LP) |
| **Power Supply** | (2) HP 460W CS Plat PL Hot Plug Power Supply (92% Efficient) |
| **Fans** | 6 Hot-Plug Redundant Fans |
| **Management** | HP iLO Management Engine (standard) |
| **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. Due to the size and weight of the server two people are required to install the server into the rack. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative. Caution: HP |

## Smart Buys

|  |  |  |
|---|---|---|
|  |  | recommends that a minimum of two people is required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
|  | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labour, 1-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| **HP ProLiant DL380e Gen8 E5-2420 1P 16GB-R Hot Plug 8 SFF 2x460W PS Server/S-Buy** <br> 686203-S01 | **Processor(s)** | Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)Turbo |
| | **Cache Memory** | 15MB (1x15MB) Level 3 |
| | **Memory** | 16GB (2 x 8GB) Registered DIMMs PC3-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B320i/512MB FBWC Controller <br> **NOTE:** Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 6Gb/s and includes SAS license key. |
| | **Hard Drive** | None ship standard <br> **NOTE:** This model comes with 7 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 8 SFF HDD Bays |
| | **Optical Drive Bay** | 1; (Optional: DVD-ROM, DVD-RW) |
| | **PCI-Express Slots** | 4 standard (1-FL/FH, 2HL/FH, 1-LP) |
| | **Power Supply** | (2) HP 460W CS Plat PL Hot Plug Power Supply |
| | **Fans** | 6 Hot-Plug Redundant Fans |
| | **Management** | HP iLO Management Engine (standard) |
| | **Form Factor** | Rack (2U) <br> **NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. Due to the size and weight of the server two people are required to install the server into the rack. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative. Caution: HP recommends that a minimum of two people is required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labour, 1-Year Onsite support with next business day response. |

## Smart Buys

| **HP ProLiant DL380e Gen8 E5-2440 2P 32GB-R Hot Plug 25 SFF 2x750W PS Server/S-Buy** 686204-S01 | | |
|---|---|---|
| | **Processor(s)** | (2) Intel® Xeon® E5-2440 (2.4GHz/6-core/15MB/7.2GT-s QPI/95W, DDR3-1333, HT, Turbo2- 3/3/4/4/5/5)Turbo |
| | **Cache Memory** | 15MB (1x15MB) Level 3 |
| | **Memory** | 32GB (4 x 8GB) Registered DIMMs PC3-10600R (1333MHz) |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Smart Array P420i/2GB FBWC Controller (RAID 0/1/1+0/5/5+0) |
| | **Hard Drive** | None ship standard<br>**NOTE:** This model comes with 24 HDD blanks if no HDD is ordered. |
| | **Internal Storage** | 25 SFF HDD Bays |
| | **Optical Drive Bay** | None |
| | **PCI-Express Slots** | 4 standard (1-FL/FH, 2HL/FH, 1-LP) |
| | **Power Supply** | (2) HP 750W CS Plat Hot Plug Power Supply |
| | **Fans** | 6 Hot-Plug Redundant Fans |
| | **Management** | HP iLO Management Engine (standard) |
| | **Form Factor** | Rack (2U)<br>**NOTE:** Includes Rack Mounting Gen8 telescoping SFF Ball Bearing Rail Kit which does allow for in rack serviceability. Due to the size and weight of the server two people are required to install the server into the rack. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative. Caution: HP recommends that a minimum of two people is required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| | **Warranty** | Server Warranty includes 3-Year Parts, 1-Year Labour, 1-Year Onsite support with next business day response. |

| **HP ProLiant DL380e Gen8 E5-2403v2 4GB-U B120i Hot Plug SATA 8 LFF 460W PS Server/S-Buy** 748204-S01 | | |
|---|---|---|
| | **Processor** | (1) Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W, DDR3-1066) Processor |
| | **Cache Memory** | 10MB (1 x 10MB) L3 cache |
| | **Memory** | 4GB (1x4GB) DDR3 UDIMM |
| | **Network Controller** | HP Ethernet 1Gb 4-port 366i Adapter |
| | **Storage Controller** | HP Dynamic Smart Array B120i Controller |
| | **Hard Drive** | None ship standard; includes 7 LFF hard drive blanks |
| | **Internal Storage** | 8 LFF HDD Bays |
| | **Power Supply** | (1) HP 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| | **Fans** | 4 Hot-Plug Non-redundant Fans |
| | **Form Factor** | Rack (2U); Includes 2U Friction Rail Kit |
| | **Warranty** | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response entitled to the server. |

## Smart Buys

| **HP ProLiant DL380e Gen8 E5-2403v2 8GB-R B320i Hot Plug 8 SFF 460W RPS Server/S-Buy** 748205-S01 | | |
|---|---|---|
| | Processor | (1) Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W, DDR3-1066) Processor |
| | Cache Memory | 10MB (1 x 10MB) L3 cache |
| | Memory | 8GB (1x8GB) DDR3 RDIMM |
| | Network Controller | HP Ethernet 1Gb 4-port 366i Adapter |
| | Storage Controller | HP Dynamic Smart Array B320i/ZM Controller |
| | Hard Drive | None ship standard; includes 7 SFF hard drive blanks |
| | Internal Storage | 8 SFF HDD Bays |
| | Power Supply | (2) HP 460W CS Gold Hot Plug Redundant Power Supplies (92% Efficient) |
| | Fans | 4 Hot-Plug Non-redundant Fans |
| | Form Factor | Rack (2U); Includes 2U BB Rail Kit with Cable Management Arm |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response entitled to the server. |

| **HP ProLiant DL380e Gen8 E5-2440v2 2P 32GB-R P420/2GB Hot Plug 25 SFF 750W RPS Server/S-Buy** 748207-S01 | | |
|---|---|---|
| | Processor | (2) Intel® Xeon® E5-2440v2(1.9GHz/8-core/20MB/7.2GT/s QPI/95W, DDR3-1600,HT, Turbo2- 3/3/4/4/5/5) Turbo |
| | Cache Memory | 20MB (1 x 20MB) L3 cache |
| | Memory | 32GB (4x8GB) DDR3 RDIMM |
| | Network Controller | HP Ethernet 1Gb 4-port 366i Adapter |
| | Storage Controller | HP Smart Array P420/2GB FBWC Controller |
| | Hard Drive | None ship standard; includes 24 SFF hard drive blanks |
| | Internal Storage | 25 SFF HDD Bays |
| | Power Supply | (2) HP 750W CS Platinum Plus Hot Plug Redundant Power Supplies (92% Efficient) |
| | Fans | 6 Hot-Plug Redundant Fans |
| | Form Factor | Rack (2U); Includes 2U BB Rail Kit with Cable Management Arm |
| | Warranty | Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. |

## Configuration Information - Factory Integrated Models

**NOTE:** This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
**NOTE:** Factory Integrated Models must start with a CTO Server.
**NOTE:** FIO indicates that this option is only available as a factory installable option.
**NOTE:** All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

## Step 1: Base Configuration (choose one of the following configurable models)

**NOTE:** Rail kits and cable management solutions are optional in CTO. See "Step 3: Choose Additional Factory Integratable Options" for details on ordering.
**NOTE:** The DL380e ships standard with the Dynamic Smart Array B120i controller which provides support for up to 6 SATA drives (greater than 4 drives requires additional cable, p/n 675856-B21) and data transmission speeds up to 3Gb/s. Customers requiring SAS support or greater than 6 drives should select either a Smart Array family controller or the HP Dynamic Smart Array B320i controller (p/n 661402-B21, implemented via riser).
**NOTE:** When the SAS-enabled riser board with the Smart Array B320i controller is installed in the server, the embedded Smart Array B120i controller is automatically disabled. In the absence of another storage controller or an expander backplane, front drives operate in ACHI or Legacy mode. In these two modes, the drives are not part of a hardware RAID or a member of a logical drive. The Locate, Drive status, and Do not remove LEDs in the drive carrier are disabled.
**NOTE:** Number of HDD blanks in a given chassis is same as number of drive cage bays.
**NOTE:** Power Supply not included - choose from Options section.

**HP Models**        HP ProLiant DL380e Gen8 12 LFF Configure-to-order Server                  669257-B21
**NOTE:** This CTO server includes an "expander-based" storage backplane. A single Smart Array P420 controller is capable of controlling all 12 LFF drives and optional rear drives.

**Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.
12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation
HP Ethernet 1Gb 4-port 366i Adapter
HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)
I/O slots - 4 Slots come standard:

- Slot 1 - FL/FH x4 PCIe 3.0 (x8 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x16 connector)
- Slot 3 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 - Low Profile x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (1 additional fan included with purchase of second processor)
Drive Cage - 12-LFF
USB - 4 Rear, 1 Front, 1 Internal, 1 SD slot
HP iLO Management Engine (standard)
**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

HP ProLiant DL380e Gen8 25 SFF Configure-to-order Server                  669256-B21
**NOTE:** This CTO server includes an "expander-based" storage backplane. A single Smart Array P420 is capable of controlling all 25 SFF drives and optional rear drives.

## Configuration Information - Factory Integrated Models

**Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.
12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation
HP Ethernet 1Gb 4-port 366i Adapter
HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)
I/O slots - 4 Slots come standard:

- Slot 1 - FL/FH x4 PCIe 3.0 (x8 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x16 connector)
- Slot 3 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 - Low Profile x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (1 additional fans included with purchase of second processor)
Drive Cage - 25-SFF
USB - 4 Rear, 1 Front, 1 Internal, 1 SD slot
HP iLO Management Engine (standard)
**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

HP ProLiant DL380e Gen8 8 LFF Configure-to-order Server                     669255-B21
**NOTE:** This CTO server supports 4, 6, and 8LFF drive configurations based on the selection of controller. The HP Dynamic Smart Array B120i is capable of controlling up to 6 SATA drives. Greater than 4 SATA drives require the use of an option cable, p/n 675856-B21). Greater than 6 SATA drives require an HP Dynamic Smart Array B320i or P420 or greater controller.

**Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.
12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation
HP Ethernet 1Gb 4-port 366i Adapter
HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)
I/O slots - 4 Slots come standard:

- Slot 1 - FL/FH x4 PCIe 3.0 (x8 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x16 connector)
- Slot 3 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 - Low Profile x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (one additional fan included with purchase of second processor)
Drive Cage - 8-LFF (Optical media drive optional)
USB - 4 Rear, 2 Front, 1 Internal, 1 SD slot
HP iLO Management Engine (standard)
**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

## Configuration Information - Factory Integrated Models

| | |
|---|---|
| HP ProLiant DL380e Gen8 8 SFF Configure-to-order Server | 669253-B21 |

**NOTE:** This CTO server supports up to 8SFF drives and is expandable up to 16 SFF drives via the optional 8SFF upgrade kit (p/n 668295-B21).

**Factory Integrated Model ships with:**

2 x HP Smart Socket Guides for fast processor installation.
12 DIMM slots for RDIMM, LRDIMM and UDIMM Memory installation
HP Ethernet 1Gb 4-port 366i Adapter
HP Dynamic Smart Array B120i Controller with Zero Memory (ZM)
I/O slots - 4 Slots ship standard:

- Slot 1 - FL/FH x4 PCIe 3.0 (x8 connector)
- Slot 2 - HL/FH x8 PCIe 3.0 (x16 connector)
- Slot 3 - HL/FH x8 PCIe 3.0 (x8 connector)
- Slot 4 - Low Profile x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selections from the PCI Information and Options subsection

System Fans - 4 (one additional fan included with purchase of second processor)
Drive Cage - 8-SFF (Optical media drive optional)
USB - 4 Rear, 2 Front, 1 Internal, 1 SD slot
HP iLO Management Engine (standard)
**NOTE:** New options are available for Rack Rail Kits; these options are no longer standard on-board with this Model Part Number. Please see HP Rack Options below for optional required options.

## Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

**HP Processors**

**NOTE:** If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21
**Entry Processors - E5-2400v2 series Processors**
**NOTE:** All support up to 1333MHz memory speeds.

| | |
|---|---|
| HP DL380e Gen8 Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W) FIO Processor Kit | 708497-L21 |
| HP DL380e Gen8 Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W) FIO Processor Kit | 708495-L21 |

**Base Processors - E5-2400v2 series Processors**
**NOTE:** All support up to 1600MHz memory speeds.

| | |
|---|---|
| HP DL380e Gen8 Intel® Xeon® E5-2430Lv2 (2.4GHz/6-core/15MB/60W) FIO Processor Kit | 746521-L21 |
| HP DL380e Gen8 Intel® Xeon® E5-2430v2 (2.25GHz/6-core/15MB/9580W) FIO Processor Kit | 724569-L21 |
| HP DL380e Gen8 Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/80W) FIO Processor Kit | 724567-L21 |
| HP DL380e Gen8 Intel® Xeon® E5-2440v2 (1.9GHz/8-core/20MB/95W) FIO Processor Kit | 724571-L21 |

**Performance Processors - E5-2400v2 series Processors**
**NOTE:** All support up to 1600MHz memory speeds.

| | |
|---|---|
| HP DL380e Gen8 Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/95W) FIO Processor Kit | 724573-L21 |
| HP DL380e Gen8 Intel® Xeon® E5-2470v2 (2.4GHz/10-core/25MB/95W) FIO Processor Kit | 724575-L21 |

## Configuration Information - Factory Integrated Models

| | | |
|---|---|---|
| | HP DL380e Gen8 Intel® Xeon® E5-2450Lv2 (1.7GHz/10-core/25MB/60W) FIO Processor Kit | 746523-L21 |
| | **Entry Processors - E5-2400 series Processors** | |
| | **NOTE:** All support up to 1066MHz memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/80W) FIO Processor Kit | 661132-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/80W) FIO Processor Kit | 661134-L21 |
| | **Base Processors - E5-2400 series Processors** | |
| | **NOTE:** All support up to1333MHz DDR3 memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2440 (2.4GHz/6-core/15MB/95W) FIO Processor Kit | 661124-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2430 (2.2GHz/6-core/15MB/95W) FIO Processor Kit | 661126-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2430L (2.0GHz/6-core/15MB/60W) FIO Processor Kit | 661138-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/95W) FIO Processor Kit | 661128-L21 |
| | **Performance Processors - E5-2400 series Processors** | |
| | **NOTE:** All support up to 1600MHz DDR3 memory speeds | |
| | HP DL380e Gen8 Intel® Xeon® E5-2470 (2.3GHz/8-core/20MB/95W) FIO Processor Kit | 661118-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2450 (2.1GHz/8-core/20MB/95W) FIO Processor Kit | 661120-L21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2450L (1.8GHz/8-core/20MB/70W) FIO Processor Kit | 661136-L21 |
| **HP Memory** | **Registered DIMMs (RDIMMs)** | |
| | **NOTE:** The following memory is supported by the E5-2400v2 series Processors | |
| | HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713981-B21 |
| | HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 731765-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713983-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713985-B21 |
| | **NOTE:** The following memory is supported by the E5-2400 series Processors | |
| | HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647893-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647895-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647897-B21 |
| | HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647899-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 690802-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647901-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 672631-B21 |
| | **Unbuffered with ECC DIMMs (UDIMMs)** | |
| | **NOTE:** The following memory is supported by the E5-2400v2 series Processors | |

## Configuration Information - Factory Integrated Models

| | |
|---|---|
| HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713975-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713977-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713979-B21 |

**NOTE:** The following memory is supported by the E5-2400 series Processors

| | |
|---|---|
| HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669320-B21 |
| HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647905-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669322-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647907-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669324-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647909-B21 |

**Load Reduced DIMMs (LRDIMMs)**

**NOTE:** The following memory is supported by E5-2400v2 or E5-2400 series Processors

| | |
|---|---|
| HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit | 647903-B21 |

**NOTE:** All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator.
**NOTE:** PC3L is a low voltage memory.
**NOTE:** Depending on the memory configuration and processor model, 1600MHz and 1333MHz memory may operate at a lower speed. Please see the see the "Memory" section later in this document and the Online Memory Configuration Tool for details at www.hp.com/go/ddr3memory-configurator.

**HP Power Supplies**

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.
**NOTE:** Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.

**HP Common Slot Titanium Power Supply Kits**

**NOTE:** The following Power Supplies offer up to 96% Efficiency support for Intelligent Power Discovery.

| | |
|---|---|
| HP 750W Common Slot Titanium Hot Plug Power Supply Kit | 697581-B21 |

**HP Common Slot Platinum Plus Power Supply Kits**
**NOTE:** The following Power Supplies offer up to 94% Efficiency support for Intelligent Power Discovery.

| | |
|---|---|
| HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656362-B21 |

## Configuration Information - Factory Integrated Models

| | |
|---|---|
| HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656363-B21 |
| HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656364-B21 |

**HP Common Slot Gold Power Supplies**
**NOTE:** The following Power Supplies offer 92% Efficiency.

| | |
|---|---|
| HP 460W Common Slot Gold Hot Plug Power Supply Kit | 503296-B21 |
| HP 750W Common Slot Gold Hot Plug Power Supply Kit | 512327-B21 |

**HP Common Slot -48VDC Power Supplies**
**NOTE:** The following Power Supplies offer 92% Efficiency.

| | |
|---|---|
| HP 750W Common Slot -48VDC Hot Plug Power Supply Kit | 636673-B21 |

**NOTE:** The HP 750W Common Slot -48VDC power supply does not ship with a power cable. It has been designed with a terminal block connection allowing for custom design of power cords by the user.

**NOTE:** Option Kits for AC power supplies include the power supply and one PDU IEC cable.

**NOTE:** HP ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For a full list of optional HP power cords please go to www.hp.com/products/powercords

| | | |
|---|---|---|
| **HP I/O Expansion Options** | HP DL380e Gen8 CPU1 with SAS Support FIO Riser Kit | 661402-B21 |

**NOTE:** If selected with HP DL380e Gen8 8LFF CTO Chassis, HP DL380eGen8 8LFF Mini SAS FIO Kit is required. This option can only be selected for HP DL380e Gen8 8LFF CTO Chassis, HP DL380e Gen8 8SFF CTO Chassis, or HP DL380e Gen8 12LFF 1:1 CTO Chassis.
**NOTE:** Includes HP Dynamic Smart Array B320i controller
**NOTE:** SAS license key (PN BC393A) is selected by default when this riser kit is selected. If SAS support is not needed, SAS license key (PN BC393A) can be deselected. SAS license key is mandatory for SAS support. Supports up to 8 drives.

| | |
|---|---|
| HP DL380e Gen8 CPU1 Riser Kit | 661404-B21 |

**NOTE:** Cannot be selected if 661402-B21 is selected.

## Step 3: Choose Additional Factory Integratable Options

**HP Rack Kits**    **NOTE:** Gen8 rail kits have changed significantly from prior generation rail kits. Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen8 server.

**NOTE:** The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

| | |
|---|---|
| HP 2U FIO Friction Rail Kit | 663476-B21 |

**NOTE:** Kit contains non-telescoping friction rails which do not allow for in-rack serviceability. The HP Gen8 Cable Management Arm is not available when using Friction Rails.

## Configuration Information - Factory Integrated Models

| | | |
|---|---|---|
| **HP Insight Software** | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License | C6N36A |

## Step 4: Choose Additional Options for Factory Integration

**NOTE:** For additional options, please refer to the "Core Options and Additional Options" section below.

## Core Options

**NOTE:** Some options may not be integrated at the factory. Contact your local sales representative for additional information.

| | | |
|---|---|---|
| **HP Unique Options** | HP DL380e Gen8 Hot Plug Fan Kit | 667855-B21 |
| | **NOTE:** Upgrades a non-redundant server with additional hot-plug fans. | |
| | HP DL380e Gen8 8 Small Form Factor (SFF) Hard Drive Cage Kit | 668295-B21 |
| | **NOTE:** With upgrade of 8SFF Cage, there is no Optical Drive support and an additional storage controller is required for 1:1 CTO Server. | |
| | HP DL380e Gen8 CPU1 Riser Kit | 661404-B21 |
| | HP DL380e Gen8 x16 PCI-E Riser Kit | 661628-B21 |
| | HP Graphic Card Power Adapter Kit | 663282-B21 |
| | **NOTE:** The adapter kit is used to provide power to high-wattage cards (example: graphics cards) that require up to 225W of power. | |
| | **NOTE:** High wattage cards are supported on the x16 FL/FH slot which is controlled by the second processor. p/n 661628-b21 is required. | |
| | **NOTE:** Because of a single x16 FL/FH slot, we support only one of the below graphic cards at a time. | |

| | | |
|---|---|---|
| **HP Processors** | **Entry Processors - E5-2400v2 series Processors** | |
| | **NOTE:** All support up to 1333MHz memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W) Processor Kit | 708497-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W) Processor Kit | 708495-B21 |
| | **Base Processors - E5-2400v2 series Processors** | |
| | **NOTE:** All support up to 1600MHz memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2430Lv2 (2.4GHz/6-core/15MB/60W) Processor Kit | 746521-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2430v2 (2.5GHz/6-core/15MB/80W) Processor Kit | 724569-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2420v2 (2.2GHz/6-core/15MB/80W) Processor Kit | 724567-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2440v2 (1.9GHz/8-core/20MB/95W) Processor Kit | 724571-B21 |
| | **Performance Processors - E5-2400v2 series Processors** | |
| | **NOTE:** All support up to 1600MHz memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2450v2 (2.5GHz/8-core/20MB/95W) Processor Kit | 724573-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2470v2 (2.4GHz/10-core/25MB/95W) Processor Kit | 724575-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2450Lv2 (1.7GHz/10-core/25MB/60W) Processor Kit | 746523-B21 |
| | **Entry Processors - E5-2400 series Processors** | |
| | **NOTE:** All support up to 1066MHz memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2407 (2.2GHz/4-core/10MB/80W) Processor Kit | 661132-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2403 (1.8GHz/4-core/10MB/80W) Processor Kit | 661134-B21 |
| | **Base Processors - E5-2400 series Processors** | |
| | **NOTE:** All support up to1333MHz DDR3 memory speeds. | |
| | HP DL380e Gen8 Intel® Xeon® E5-2440 (2.4GHz/6-core/15MB/95W) Processor Kit | 661124-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2430 (2.2GHz/6-core/15MB/95W) Processor Kit | 661126-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2430L (2.0GHz/6-core/15MB/60W) Processor Kit | 661138-B21 |
| | HP DL380e Gen8 Intel® Xeon® E5-2420 (1.9GHz/6-core/15MB/95W) Processor Kit | 661128-B21 |

## Core Options

**Performance Processors - E5-2400 series Processors**
**NOTE:** All support up to 1600MHz DDR3 memory speeds.

| | |
|---|---|
| HP DL380e Gen8 Intel® Xeon® E5-2470 (2.3GHz/8-core/20MB/95W) Processor Kit | 661118-B21 |
| HP DL380e Gen8 Intel® Xeon® E5-2450 (2.1GHz/8-core/20MB/95W) Processor Kit | 661120-B21 |
| HP DL380e Gen8 Intel® Xeon® E5-2450L (1.8GHz/8-core/20MB/70W) Processor Kit | 661136-B21 |

**NOTE:** Up to 2 processors supported.
**NOTE:** HT indicates that the processor model supports Intel® /Hyper-Threading Technology
**NOTE:** Turbo2: Intel® Turbo Boost Technology 2.0 provides more computing power when you need it with performance that adapts to spikes in your workload and delivers more performance upside than then previous generation turbo technology.
**NOTE:** DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
**NOTE:** For the Intel® C600 Chipset E5-2400 and E5-2400 v2 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2400x v#, 2 = number of CPUs in a Node, 4 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# = version number.

**HP Memory**

**NOTE:** To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html
**NOTE:** HP memory from previous generation servers are not fully compatible with Smart Memory features in Gen8 Servers.

**Registered DIMMs (RDIMMs)**

**NOTE:** The following memory is supported by the E5-2400v2 series Processors

| | |
|---|---|
| HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713981-B21 |
| HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 731765-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713983-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy | 647893-S21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713985-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy | 647895-S21 |

**NOTE:** The following memory is supported by the E5-2400 series Processors

| | |
|---|---|
| HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647893-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647895-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647897-B21 |

## Core Options

| | |
|---|---|
| HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy | 647897-S21 |
| HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647899-B21 |
| HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy | 647899-S21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 690802-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647901-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit S-Buy | 647901-S21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 672631-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit S-Buy | 672631-S21 |

**Unbuffered with ECC DIMMs (UDIMMs)**

**NOTE:** The following memory is supported by the E5-2400v2 series Processors

| | |
|---|---|
| HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713975-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713977-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713979-B21 |

**NOTE:** The following memory is supported by the E5-2400 series Processors

| | |
|---|---|
| HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669320-B21 |
| HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647905-B21 |
| HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit S-Buy | 647905-S21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669322-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647907-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit S-Buy | 647907-S21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669324-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647909-B21 |

**Load Reduced DIMMs (LRDIMMs)**

**NOTE:** The following memory is supported by E5-2400v2 or E5-2400 series Processors

| | |
|---|---|
| HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit | 647903-B21 |

## Core Options

**NOTE:** All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator.
**NOTE:** PC3L is a low voltage memory.

| | | |
|---|---|---|
| **HP Optical Drives** | HP 12.7mm Slim SATA DVD-ROM JackBlack Optical Drive | 652232-B21 |
| | HP 12.7mm Slim SATA DVD-RW JackBlack Optical Drive | 652235-B21 |

| | | |
|---|---|---|
| **HP Hard Drives** | **SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives** | |
| | HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 697574-B21 |
| | HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652589-B21 |
| | HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy | 652589-S21 |
| | HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652583-B21 |
| | HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy | 652583-S21 |
| | HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652572-B21 |
| | HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652564-B21 |
| | HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy | 652564-S21 |
| | HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652611-B21 |
| | HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy | 652611-S21 |
| | HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652605-B21 |
| | HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive S-Buy | 652605-S21 |
| | **SAS Hot Plug SmartDrive SFF (2.5-inch) Midline Drives** | |
| | HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652749-B21 |
| | HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652745-B21 |
| | **SAS Hot Plug SmartDrive LFF (3.5-inch) Enterprise Drives** | |
| | HP 600GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652620-B21 |
| | HP 450GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652615-B21 |
| | **SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives** | |
| | HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 695510-B21 |
| | HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652766-B21 |
| | HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652757-B21 |
| | HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652753-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/12244_na/12244_na.html

| | | |
|---|---|---|
| | **6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives** | |
| | HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 655710-B21 |
| | HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 655708-B21 |
| | HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy | 655708-S21 |
| | **6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives** | |
| | HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 693687-B21 |

## Core Options

| | |
|---|---|
| HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 628061-B21 |
| HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658079-B21 |
| HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 657750-B21 |
| HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy | 657750-S21 |
| HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658071-B21 |
| HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive S-Buy | 658071-S21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13021_na/13021_na.html

**6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives**

| | |
|---|---|
| HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 717965-B21 |
| HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 734360-B21 |

**6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives**

| | |
|---|---|
| HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 718171-B21 |
| HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 734362-B21 |

**6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives**

| | |
|---|---|
| HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 717973-B21 |
| HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 717971-B21 |
| HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 739898-B21 |
| HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 739888-B21 |
| HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 717969-B21 |

**6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives**

| | |
|---|---|
| HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 718189-B21 |
| HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 739900-B21 |
| HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 718183-B21 |
| HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive | 739890-B21 |
| HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 718177-B21 |

**6G SATA ME Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives**

## Core Options

| | |
|---|---|
| HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691868-B21 |
| HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691866-B21 |
| HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691864-B21 |
| HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691862-B21 |

**6G SATA ME Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives**

| | |
|---|---|
| HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691860-B21 |
| HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691856-B21 |
| HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691854-B21 |
| HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 691852-B21 |

**6G SAS ME Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives**

| | |
|---|---|
| HP 800GB 6G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 690829-B21 |
| HP 400GB 6G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 690827-B21 |
| HP 200GB 6G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive | 690825-B21 |

**6G SAS SLC Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives**

| | |
|---|---|
| HP 400GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive | 653082-B21 |
| HP 200GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive | 653078-B21 |

**3G SATA MLC Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives**

| | |
|---|---|
| HP 400GB 3G SATA MLC SFF (2.5-inch) SC Enterprise Mainstream 3yr Warranty Solid State Drive | 653120-B21 |
| HP 200GB 3G SATA MLC SFF (2.5-inch) SC Enterprise Mainstream 3yr Warranty Solid State Drive | 653118-B21 |

**3G SATA MLC Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives**

| | |
|---|---|
| HP 400GB 3G SATA MLC LFF (3.5-inch) SC Enterprise Mainstream 3yr Warranty Solid State Drive | 653126-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/14038_na/14038_na.html

**Hard Drive Kits**
**NOTE:** All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

| | |
|---|---|
| HP LFF Gen8 Hard Drive Blank Kit | 666986-B21 |

## Core Options

| | |
|---|---|
| HP SFF Gen8 Hard Drive Blank Kit | 666987-B21 |
| HP 2U Gen8 2 LFF Rear Kit | 663278-B21 |

**NOTE:** Supports 2 hot plug drives in the back of server and the kit includes multiple cable options which allow connections between rear, front backplanes and also between rear backplane, motherboard.

| | |
|---|---|
| HP 2U Gen8 2 SFF Rear Kit | 663280-B21 |

**NOTE:** Supports 2 hot plug drives in the back of server and the kit includes multiple cable options which allow connections between rear, front backplanes and also between rear backplane, motherboard.

| | |
|---|---|
| HP DL380e Gen8 8 Small Form Factor (SFF) Hard Drive Cage Kit | 668295-B21 |

**NOTE:** Provides support for an additional 8 SFF drives. Requires a separate controller. HP recommends the Smart Array P420 controller with 1Gb of FBWC.

**NOTE:** The HP ProLiant DL380e Gen8 Smart Storage solutions are equipped with entirely re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".
**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

| **HP Networking** | **Gigabit Ethernet adapters** | |
|---|---|---|
| | HP NC112T PCI Express Gigabit Server Adapter | 503746-B21 |
| | HP NC365T 4-port Ethernet Server Adapter | 593722-B21 |
| | HP Ethernet 1Gb 4-port 331T Adapter | 647594-B21 |
| | HP Ethernet 1Gb 2-port 332T Adapter | 615732-B21 |
| | HP Ethernet 1Gb 2-port 361T Adapter | 652497-B21 |
| | **10 Gigabit Ethernet Adapters** | |
| | HP NC523SFP 10Gb 2-port Server Adapter | 593717-B21 |
| | HP Ethernet 10Gb 2-port 530SFP Adapter | 652503-B21 |
| | HP Ethernet 10Gb 2-port 530T Adapter | 656596-B21 |
| | HP Ethernet 10Gb 2-port 560SFP+ Adapter | 665249-B21 |
| | HP NC552SFP 10Gb 2-port Ethernet Server Adapter | 614203-B21 |

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs

## Core Options

| | | |
|---|---|---|
| **HP InfiniBand** | QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA | 583211-B21 |
| | HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA | 592520-B21 |
| | HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter | 649281-B21 |

**NOTE:** Please see the QuickSpecs for additional information:
http://h18000.www1.hp.com/products/quickspecs/13078_na/13078_na.html

| | | |
|---|---|---|
| **HP I/O Expansion Options** | HP DL380e Gen8 CPU1 Riser Kit | 661404-B21 |

**NOTE:** This kit provides three slots that run off of first processor.

| | | |
|---|---|---|
| | HP DL380e Gen8 x16 PCI-E Riser Kit | 661628-B21 |

**NOTE:** This kit provides two additional slots that run off of second processor.

**HP Power Supplies**

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

**NOTE:** Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.

**HP Common Slot Titanium Power Supply Kits**

| | |
|---|---|
| HP 750W Common Slot Titanium Hot Plug Power Supply Kit | 697581-B21 |

**NOTE:** The above Power Supplies offer 96% Efficiency with support for Intelligent Power Discovery.*

**HP Common Slot Platinum Plus Power Supply Kits**

| | |
|---|---|
| HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656362-B21 |
| HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656363-B21 |
| HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656364-B21 |

**NOTE:** The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.

**HP Common Slot Gold Power Supplies**

| | |
|---|---|
| HP 460W Common Slot Gold Hot Plug Power Supply Kit | 503296-B21 |
| HP 750W Common Slot Gold Hot Plug Power Supply Kit | 512327-B21 |

**HP Common Slot -48VDC Power Supplies**

| | |
|---|---|
| HP 750W Common Slot -48VDC Hot Plug Power Supply Kit | 636673-B21 |

**NOTE:** The HP 750W Common Slot -48VDC power supply does not ship with a power cable. It has been designed with a terminal block connection allowing for custom design of power cords by the user.

**NOTE:** Option Kits contain optional power supply, an IEC power cable and PDU IEC cables.

**NOTE:** HP ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For a full list of optional HP power cords please go to www.hp.com/products/powercords

**NOTE:** Power Specification and Technical Content for supported power supplies can be found at:
http://h18000.www1.hp.com/products/quickspecs/14209_na/14209_na.html

## Core Options

| HP Graphic Options | HP Graphic Card Power Adapter Kit | 663282-B21 |

**NOTE:** The adapter kit is used to provide power to high-wattage cards (example: graphics cards) that require up to 225W of power.
**NOTE:** High wattage cards are supported on the x16 FL/FH slot which is controlled by the second processor. p/n 661628-b21 is required.
**NOTE:** Because of a single x16 FL/FH slot, we support only one of the below graphic cards at a time.

NVIDIA Quadro 6000 6GB PCI-E Adapter                                              655935-B21

**NOTE:** Only the following OS types are supported: 64-bit Only: Red Hat Enterprise Linux 5.x, Red Hat Enterprise Linux 6.x, SUSE Linux Enterprise Server 11 SPx. 64-bit Only: Windows Server 2008 R2 SPx.

NVIDIA Quadro K4000 PCI-E Graphics Adapter                                        730870-B21

**NOTE:** Only the following OS types are supported: 64-bit Only: Red Hat Enterprise Linux 5.x, Red Hat Enterprise Linux 6.x, SUSE Linux Enterprise Server 11 SPx. 64-bit Only: Windows Server 2008 R2 SPx.

**HP Cooling Options**     HP DL380e Gen8 Hot Plug Fan Kit                        667855-B21

**NOTE:** This kit contains a single fan and is used to upgrade non-redundant configurations to redundant configurations.

## Additional Options

| | | |
|---|---|---|
| **HP Insight Software** | **HP Insight Control** | |
| | HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License | C6N27A |
| | HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License S-Buy | C6N27S |
| | HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License S-Buy | C6N28ASE |
| | HP Insight Control Server Provisioning Media Kit | BD883A |
| | HP Insight Management Media Kit | C6N31A |
| | HP Insight Control Server Deployment including 1yr 24x7 Support Electronic License | T9082AAE |
| | HP Insight Control Server Deployment including 1yr 24x7 Support Single Server License | 452151-B21 |

**NOTE:** Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.
**NOTE:** Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.
**NOTE:** Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates.

**NOTE:** For additional license options please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_na/12631_na.html

**HP Integrated Lights-Out (iLO) Advanced for ProLiant**

| | | |
|---|---|---|
| | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 512485-B21 |
| | HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates | BD505A |

**HP iLO Essentials**

| | | |
|---|---|---|
| | HP Integrated Lights-Out Essentials including 3yr 24x7 Tech Support and Updates Single Svr License | BD774A |
| | HP Integrated Lights-Out Essentials including 1yr 24x7 Tech Support and Updates Single Svr License | BD775A |

**NOTE:** For additional license options please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/14276_na/14276_na.html
**NOTE:** For more information, visit: http://www.hp.com/go/ilo.

| | | |
|---|---|---|
| **HP Converged Infrastructure Management Software** | **HP OneView** | |
| | HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic | E5Y34A |
| | HP OneView Media Kit Phys No Lic | E5Y37A |
| | HP OneView w/o iLO Adv incl 3yr 24x7 Supp Phys 1 Svr Lic | E5Y38A |
| | HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU | E5Y35AAE |
| | HP OneView w/o iLO Adv inc 3yr 24x7 Supp Flex Qty E-LTU | E5Y39AAE |

## Additional Options

| | | |
|---|---|---|
| **High Performance Clusters** | HP Insight Cluster Management Utility 1yr 24x7 Flexible License | QL803B |
| | HP Insight Cluster Management Utility 3yr 24x7 Flexible License | BD476A |

**NOTE:** These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.

| | | |
|---|---|---|
| | HP Insight Cluster Management Utility Media | BD477A |

**NOTE:** For additional license kits please see the QuickSpecs at:
http://h18004.www1.hp.com/products/quickspecs/12612_na/12612_na.html

| | | |
|---|---|---|
| **HP I/O Accelerator Options** | **Second Generation Accelerators** | |
| | HP 365GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers | 673642-B21 |
| | HP 785GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers | 673644-B21 |
| | HP 1205GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers | 673646-B21 |
| | HP 2410GB Multi Level Cell G2 PCIe ioDrive2 Duo for ProLiant Servers | 673648-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13587_na/13587_na.html

| | | |
|---|---|---|
| **HP Security** | HP 2U Security Bezel Kit | 666988-B21 |
| | HP Trusted Platform Module Option | 488069-B21 |

**NOTE:** The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: www.hp.com/go/TPM.
**NOTE:** ProLiant OS pre-installed units will come with the partition required for TPM deployment.
**NOTE:** The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

| | | |
|---|---|---|
| **HP Storage Controllers** | **SAS Controllers** | |
| | **Smart Array P222 Controller** | |
| | HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller | 631667-B21 |
| | **Smart Array P420 Controller** | |
| | HP Smart Array P420/1GB FBWC 6Gb 2-ports Int SAS Controller | 631670-B21 |
| | HP Smart Array P420/2GB FBWC 6Gb 2-ports Int SAS Controller | 631671-B21 |
| | **Smart Array P421 Controller** | |

## Additional Options

| | |
|---|---|
| HP Smart Array P421/1GB FBWC 6Gb 2-ports Ext SAS Controller | 631673-B21 |
| HP Smart Array P421/2GB FBWC 6Gb 2-ports Ext SAS Controller | 631674-B21 |
| **HP Smart Array P430 Controller** | |
| HP Smart Array P430/2GB FBWC 6Gb 1-port Int SAS Controller | 698529-B21 |
| **HP Smart Array P431 Controller** | |
| HP Smart Array P431/2GB FBWC 6Gb 2-ports Ext SAS Controller | 698531-B21 |
| **Smart Array P822 Controller** | |
| HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller | 615418-B21 |
| **Optional Upgrades** | |
| HP 2GB P-series Smart Array Flash Backed Write Cache | 631681-B21 |
| HP 512MB B-series 36 inch Dynamic Smart Array Flash Backed Write Cache for ML/DL | 631922-B21 |

**NOTE:** This kit includes a cable and cache module that is used in conjunction with the B320i controller.

| | |
|---|---|
| HP SAS License Key No Media 1 Single Server License for | B320iBC393A |
| HP DL380e Gen8 Smart Array Cable Kit | 672250-B21 |
| HP Gen8 2-port SATA Cable Kit | 675856-B21 |
| HP DL380e Gen8 Internal SAS 540mm Cable Kit | 725601-B21 |
| HP DL380e Gen8 Internal SAS 690mm Cable Kit | 737671-B21 |
| HP DL380e Gen8 Internal SAS 780mm Cable Kit | 737673-B21 |
| HP SmartCache No Media 24x7 Technical Support 1 Svr License | D7S26A |
| HP SmartCache No Media 24x7 Technical Support Flexible License | D7S27A |
| HP SmartCache No Media 24x7 Technical Support Electronic License | D7S27AAE |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/14227_na/14227_na.html (Smart Array P222 Controller)
http://h18000.www1.hp.com/products/quickspecs/14228_na/14228_na.html (Smart Array P420 Controller)
http://h18000.www1.hp.com/products/quickspecs/14229_na/14229_na.html (Smart Array P421 Controller)
http://h18000.www1.hp.com/products/quickspecs/14341_na/14341_na.html (Smart Array P822 Controller)
http://h18000.www1.hp.com/products/quickspecs/14343_na/14343_na.html (Dynamic Smart Array Controllers)

**Host Bus Adapter**

| | |
|---|---|
| HP H220 Host Bus Adapter | 650933-B21 |
| HP H221 Host Bus Adapter | 650931-B21 |
| HP H221 PCIe 3.0 SAS Host Bus Adapter | 729552-B21 |
| HP H222 Host Bus Adapter | 650926-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18004.www1.hp.com/products/quickspecs/14336_na/14336_na.html (HBA 220)
http://h18004.www1.hp.com/products/quickspecs/14222_na/14222_na.html

## Additional Options

(HBA 221)
http://h18004.www1.hp.com/products/quickspecs/14337_na/14337_na.html
(HBA 222)

**SCSI HBA**

| | |
|---|---|
| HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter | 412911-B21 |

**NOTE:** Please see the following QuickSpecs for additional information:
http://h18000.www1.hp.com/products/quickspecs/12566_na/12566_na.html
(SC11Xe HBA)

| | | |
|---|---|---|
| **HP Cable Options** | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable | QK735A |
| | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable | QK732A |
| | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable | QK733A |
| | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable | QK736A |
| | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable | QK737A |
| | HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable | QK734A |

| | | |
|---|---|---|
| **HP Power Cords** | HP C13 - Nema 6-15P US 250V 15A JP 3.6m Power Cord | A0N33A |
| | HP C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord | AF556A |

**NOTE:** HP ProLiant servers ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).

**HP Tape Backup**

**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: http://www.hp.com/go/tape. For hardware and software compatibility of HP tape backup products see: http://www.hp.com/storage/SPOCK and www.hp.com/go/ebs.
**NOTE:** For Internal drives to be connected to DL servers please make sure that you order rack mount kit as well.

| | |
|---|---|
| HP StoreEver 1U USB Rack-mount Kit | A8007B |
| HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit | C0L99A |
| HP StoreEver LTO-6 Ultrium 6650 External Tape Drive | EH964A |
| HP StoreEver LTO-6 Ultrium 6250 External Tape Drive | EH970A |

## Additional Options

**HP Disk Backup**

**HP RDX Removable Disk Backup System**

| | |
|---|---|
| HP RDX320 USB3.0 External Disk Backup System | B7B63A |
| HP RDX500 USB3.0 Internal Disk Backup System | B7B64A |
| HP RDX500 USB3.0 External Disk Backup System | B7B66A |
| HP RDX1000 USB3.0 Internal Disk Backup System | B7B67A |
| HP RDX1000 USB3.0 External Disk Backup System | B7B69A |

**HP StoreOnce Backup systems**

| | |
|---|---|
| HP StoreOnce 2620 iSCSI Backup | BB852A |

**NOTE:** Please see the QuickSpecs for additional part numbers, Technical Specifications, and additional information:
http://h18000.www1.hp.com/products/quickspecs/13036_na/13036_na.html

**NOTE:** For the complete range of RDX drives and media see:
http://www.hp.com/go/rdx. For hardware and software compatibility of HP disk backup products see: http://www.hp.com/storage/SPOCK.

**HP Storage Options**

**Storage Fibre Channel HBA**
**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see:
http://h18006.www1.hp.com/storage/saninfrastructure/hba.html

**Brocade Fibre Channel HBAs**

| | |
|---|---|
| HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter | AP769B |
| HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter | AP770B |

**Emulex Fibre Channel HBAs**

| | |
|---|---|
| HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter | AJ762B |
| HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter | AJ763B |
| HP SN1000E 16Gb 1-port PCIe Fibre Channel Host Bus Adapter | QR558A |
| HP SN1000E 16Gb 2-port PCIe Fibre Channel Host Bus Adapter | QR559A |
| HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter | C8R38A |
| HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter | C8R39A |

**QLogic Fibre Channel HBAs**

| | |
|---|---|
| HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter | AK344A |
| HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter | AJ764A |
| HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter | QW971A |
| HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter | QW972A |

**Converged Network Adapter**

| | |
|---|---|
| HP CN1100E Dual Port Converged Network Adapter | BK835A |
| HP CN1000Q Dual Port Converged Network Adapter | BS668A |
| HP StoreFabric CN1100R Dual Port Converged Network Adapter | QW990A |

## Additional Options

| HP Uninterruptible Power Systems | **HP Rack-mountable UPS** | |
|---|---|---|
| | **HP R1500 G3 Uninterruptible Power Supply (UPS)** | |
| | HP R1.5kVA G3 1U NA Uninterruptible Power System | AF469A |
| | **NOTE:** Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14059_na/14059_na.html | |
| | **HP R/T3000 G2 Uninterruptible Power System (UPS)** | |
| | HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System | AF466A |
| | HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System | AF467A |
| | **NOTE:** Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14058_na/14058_na.html | |
| | **R5000 Uninterruptible Power System (UPS)** | |
| | HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System | AF460A |
| | **NOTE:** Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14109_na/14109_na.html | |
| | **R7000 Uninterruptible Power System (UPS)** | |
| | HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System | AF462A |
| | **NOTE:** Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14110_na/14110_na.html | |
| | **NOTE:** For additional information on sizing your HP UPS, please reference: http://www.upssizer.com | |
| | **NOTE:** Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords. | |

| HP Basic Power Distribution Units | | |
|---|---|---|
| | HP 1.9kVA 120 Volt 12 Outlet NA/JP Basic Power Distribution Unit | H5M54A |
| | HP 2.8kVA 120 Volt 18 Outlet NA/JP Basic Power Distribution Unit | H5M55A |
| | HP 3.6kVA 200-240 Volt 12 Outlet WW Basic Power Distribution Unit | H5M56A |
| | HP 3.6kVA 200-240 Volt 20 Outlet WW Basic Power Distribution Unit | H5M57A |
| | HP 4.9kVA 208 Volt 20 Outlet NA/JP Basic Power Distribution Unit | H5M58A |
| | HP 4.9kVA 208 Volt 30 Outlet NA/JP Basic Power Distribution Unit | H5M59A |
| | HP 8.3kVA 208 Volt 36 Outlet NA/JP Basic Power Distribution Unit | H5M60A |
| | HP 8.6kVA 208 Volt Three Phase 18 Outlet NA/JP Basic Power Distribution Unit | H5M61A |
| | HP 8.6kVA 208 Volt Three Phase 30 Outlet NA/JP Basic Power Distribution Unit | H5M62A |
| | HP 5.7kVA 208 Volt Three Phase 27 Outlet NA/JP Dual Voltage Basic Power Distribution Unit | H5M63A |
| | HP 8.6kVA 208 Volt Three Phase 30 Outlet NA/JP Dual Voltage Basic Power Distribution Unit | H5M64A |
| | HP 11kVA 400 Volt Three Phase 42 Outlet NA Basic Power Distribution Unit | H5M67A |
| | HP Hardwired 200-240 Volt 36 Outlet WW Basic Power Distribution Unit | H5M75A |
| | HP 13.2kVA 480 Volt Three Phase 15 Outlet NA Basic Power Distribution Unit | H3X07A |
| | HP 19.9kVA 480 Volt Three Phase 30 Outlet NA Basic Power Distribution Unit | H3X08A |

## Additional Options

**HP 277 Volt options for H3X07A and H3X08A**

**NOTE:** Additional HP Power Distribution Units are available. For a complete list of all HP PDUs and additional information please visit www.hp.com/go/rackandpower.

| | |
|---|---|
| HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer | H3X09A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/14557_na/14557_na.html

| | | |
|---|---|---|
| **HP Remote Monitoring Power Distribution Units** | HP 2.8kVA 120 Volt 12 Outlet NA/JP Monitored Power Distribution Unit | D9N43A |
| | HP 4.9kVA 208 Volt 12 Outlet NA/JP Monitored Power Distribution Unit | D9N44A |
| | HP 3.6kVA 200-240 Volt 16 Outlet WW Monitored Power Distribution Unit | D9N45A |
| | HP 3.6kVA 200-240 Volt 12 Outlet WW Monitored Power Distribution Unit | D9N46A |
| | HP 4.9kVA 208 Volt 24 Outlet NA/JP Monitored Power Distribution Unit | D9N47A |
| | HP 8.3kVA 208 Volt 33 Outlet NA Monitored Power Distribution Unit | D9N49A |
| | HP 8.6kVA 208 Volt Three Phase 21 Outlet NA/JP Monitored Power Distribution Unit | D9N51A |
| | HP 5.7kVA 208 Volt Three Phase 21 Outlet NA/JP Dual Voltage Monitored Power Distribution Unit | D9N52A |
| | HP 8.6kVA 208 Volt Three Phase 24 Outlet NA/JP Dual Voltage Monitored Power Distribution Unit | D9N53A |
| | HP 17.3kVA 208 Volt Three Phase 27 Outlet NA/JP Monitored Power Distribution Unit | D9N54A |
| | HP 14.4kVA 208 Volt Three Phase 24 Outlet NA Monitored Power Distribution Unit | D9N58A |
| | HP 17.3kVA 208 Volt Three Phase 24 Outlet NA/JP Monitored Power Distribution Unit | D9N59A |
| | HP 16.6kVA 400 Volt Three Phase 33 Outlet NA Monitored Power Distribution Unit | D9N61A |
| | HP 16.6kVA 400 Volt Three Phase 24 Outlet NA Monitored Power Distribution Unit | D9N62A |
| | HP 19.9kVA 480 Volt Three Phase 30 Outlet NA Monitored Power Distribution Unit | D9N63A |

**HP Environmental Sensor for Remote Monitored PDUs**

| | |
|---|---|
| Environmental Sensor for Remote Monitored PDUs | E2D53A |

**NOTE:** Please see the QuickSpecs for additional information:
http://h18000.www1.hp.com/products/quickspecs/14669_na/14669_na.html

| | | |
|---|---|---|
| **HP Intelligent Power Distribution Units** (iPDU) | **iPDU Core Units** | |
| | HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit | AF520A |
| | HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit | AF522A |
| | **iPDU Extension Bars** | |
| | HP 5xC13 Intelligent PDU Extension Bar G2 Kit | AF547A |
| | HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar | AF528A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13650_na/13650_na.html

## Additional Options

| | | |
|---|---|---|
| **HP Power Distribution Units** | **Monitored PDUs** | |
| | **HP Monitored Power Distribution Unit: Full Rack Version** | |
| | HP 8.6kVA 24A Single Input Three Phase NA/JP Monitored Power Distribution Unit | AF504A |
| | HP 8.3kVA 40A Single Input Single Phase NA/JP Monitored Power Distribution Unit | AF506A |
| | **HP Monitored Power Distribution Unit: Half Rack Version** | |
| | HP 4.9kVA 24A Single Input Single Phase NA/JP Monitored Power Distribution Unit | AF914A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12118_na/12118_na.html

**NOTE:** For additional information on HP Power Distribution Units including accessories please go to: www.hp.com/go/pdu.

**NOTE:** Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.

| | | |
|---|---|---|
| **HP Rack Series** | **HP Intelligent Series Rack** | |
| | HP 636 1075mm Pallet Intelligent Series Rack | BW895A |
| | HP 636 1075mm Shock Intelligent Series Rack | BW896A |
| | HP 642 1075mm Pallet Intelligent Series Rack | BW903A |
| | HP 642 1075mm Shock Intelligent Series Rack | BW904A |
| | HP 647 1075mm Pallet Intelligent Series Rack | BW911A |
| | HP 647 1075mm Shock Intelligent Series Rack | BW912A |

**NOTE:** Please see the QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/14223_na/14223_na.html

**NOTE:** For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.

| | | |
|---|---|---|
| **HP Rack Options** | **HP Location Discovery Services** | |
| | HP 36U Location Discovery Kit | BW945A |
| | HP 42U Location Discovery Kit | BW946A |
| | HP 47U Location Discovery Kit | BW947A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14429_na/14429_na.html

**HP USB Keyboard and Mouse**

| | |
|---|---|
| HP USB BFR with PVC Free US Keyboard/Mouse Kit | 631341-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13972_na/13972_na.html

**HP TFT7600 G2 KVM Console Rackmount Keyboard Monitor**

## Additional Options

| | |
|---|---|
| HP TFT7600 G2 KVM Console Rackmount Keyboard US Monitor | AZ870A |
| HP TFT7600 G2 KVM Console Rackmount Keyboard US TAA Monitor | AZ885A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13731_na/13731_na.html

### HP Server Console Switches

| | |
|---|---|
| HP Server Console 0x2x8 Port Analog Switch | AF616A |
| HP Server Console 0x2x16 Port Analog Switch | AF617A |
| HP TAA 0x2x16xKVM Server Console G2 Switch | AF626A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/11834_na/11834_na.html

### HP Server Console Switch G2 with Virtual Media & CAC

| | |
|---|---|
| HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software | AF618A |
| HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software | AF619A |
| HP KVM CAT5 1-pack USB Interface Adapter | 336047-B21 |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13475_na/13475_na.html

### HP IP Console Switch G2 with Virtual Media & CAC

| | |
|---|---|
| HP 1x4 USB/PS2 KVM Console Switch | AF611A |
| HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software | AF620A |
| HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software | AF621A |
| HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software | AF622A |

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13474_na/13474_na.html

### Rail Kits

| | |
|---|---|
| HP 2U Large Form Factor Ball Bearing Gen8 Rail Kit with CMA | 663480-B21 |
| HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA | 663478-B21 |
| HP Rack Cable Management Velcro Clips | 379820-B21 |

**NOTE:** Gen8 rail kits have changed significantly from prior generation rail kits. Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen8 server.
**NOTE:** Rail kits are optional for DL380p Gen8 and are no longer included standard with the server. Customers have the option to purchase their server without a rail kit.
**NOTE:** Ball bearing rail kits contain telescoping rails which allow for in-rack serviceability.
**NOTE:** The HP 2U Gen8 Cable Management Arm is not available when using Friction Rails.
**NOTE:** To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (p/n 695539-001). Caution: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number

## Additional Options

of people to use for any installation.

| | | |
|---|---|---|
| **HP USB and SD Options** | HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit | 737953-B21 |
| | HP 2GB USB Flash Media Drive Key Kit | 608447-B21 |
| | **NOTE:** HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions. | |
| | HP 8GB SD Enterprise Mainstream Flash Media Kit | 726113-B21 |
| | HP 32GB SD Enterprise Mainstream Flash Media Kit | 700136-B21 |

| | | |
|---|---|---|
| **HP Care Pack Services** | **Proactive Care** | |
| | HP 3 year 4 hour 24x7 ProLiant DL380e Proactive Care Service | U6E33E |
| | HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant DL380e Proactive Care Service | U6E34E |
| | HP 3 year 6 hour Call to Repair 24x7 ProLiant DL380e Proactive Care Service | U6E39E |
| | HP 3 year 6 hour Call to Repair 24x7 w/Defective Media Retention ProLiant DL380e Proactive Care Svc | U6E40E |
| | HP 3 year 4 hour 24x7 ProLiant DL380e with Insight Control Proactive Care Service | U6G61E |
| | HP 3 year 4 hour 24x7 w/Defective Media Retention DL380e with Insight Control Proactive Care Service | U6G62E |
| | HP 3 year 6 hour Call to Repair 24x7 ProLiant DL380e with Insight Control Proactive Care Service | U6G63E |
| | HP 3 yr 6hrCalltoRepair 24x7 w/Defective Media Retention DL380e w/Insight Control Proactive Care SVC | U6G64E |
| | **NOTE:** Collaborative Support plus Proactive services delivered by the onshore, local language Advanced Solution Center (ASC), end-to-end case ownership from a Technical Solution Specialists and Technical Account Manager who remotely delivers firmware/software revision management, proactive scans and incident trend reports. Recommended for customers running a virtualized infrastructure and/or customers who desire an enhanced call support experience | |
| | **Collaborative Support** | |
| | HP 3 year 4 hour 24x7 ProLiant DL380e Collaborative Support | U6E31E |
| | HP 3 year 4 hour 24x7 with Defective Media Retention ProLiant DL380e Collaborative Support | U6E32E |
| | HP 3 year 6 hour Call to Repair 24x7 ProLiant DL380e Collaborative Support | U6E37E |
| | HP 3 year 6 hour Call to Repair 24x7 w/Defective Media Retention ProLiant DL380e Collaborative Sup | U6E38E |
| | **NOTE:** Hardware break/fix plus 24x7 software diagnosis support with collaborative call management for a broad spectrum of 3rd Party software products including O/S and hypervisors. Recommended for customers procuring 3rd party SW O/S and hypervisors from the software vendors directly and deploying them on HP ProLiant servers. | |
| | **Proactive Care Personalized Support Option** | |

## Additional Options

| | |
|---|---|
| HP 3 year ISS ProactiveCare Personalized Support | U6W98E |

**NOTE:** To add an onsite Account Support Manager (ASM) to Proactive Care. ASM is an assigned resource who delivers support planning and brings technical expertise and best practices advices for the customer's environment.

**Installation Services**

| | |
|---|---|
| HP Install ProLiant DL380e Service | U6E81E |
| HP Startup ProLiant DL380e Service | U6E83E |

**NOTE:** For more information, customer/resellers can contact:

http://www.hp.com/services/carepack

**NOTE:** Reduce the time required to get your system up and running and help minimize disruptions to your business.
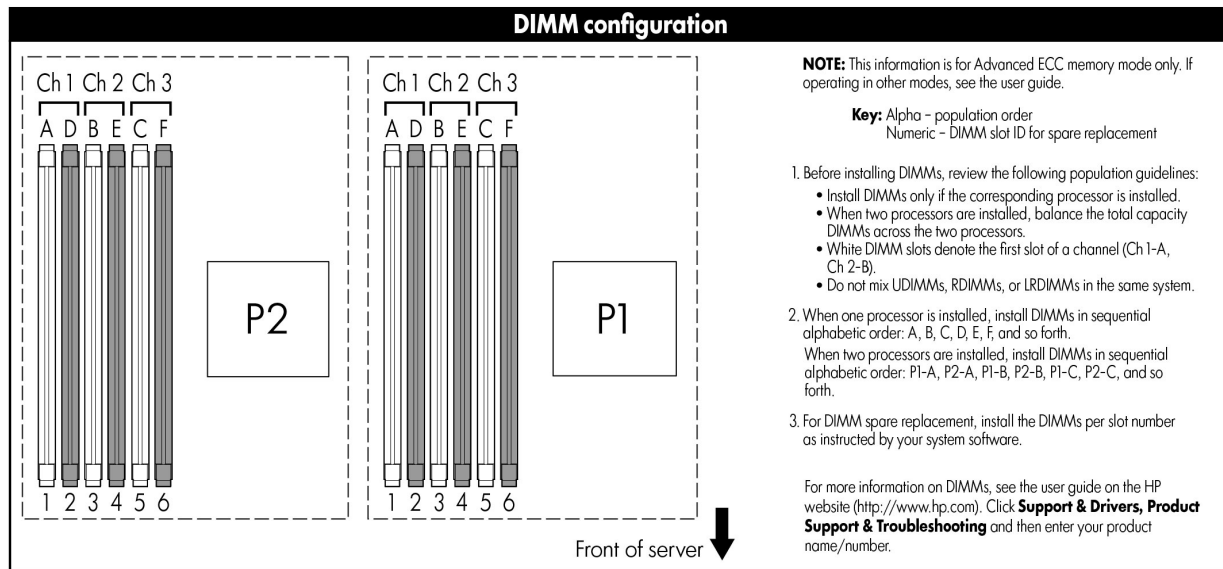
## Memory

For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool:
www.hp.com/go/ddr3memory-configurator

**Memory Subsystem Architecture**

Each Intel® Xeon® E5-2400v2 and E5-2400 family processor socket contains three memory channels per installed processor with two DIMMs per channel for a total of six (6) DIMMs or a grand total of twelve (12) DIMMs for the server. Up to 32GB capacity DIMMs are supported for 384GB of memory (12 DIMM slots x 32GB per DIMM).

**Memory population guidelines**



**General Memory Population Rules and Guidelines:**

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors and to load the channels similarly whenever possible.
- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel. Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor
- RDIMMs operating at either 1.35V or 1.5V may be mixed in any order, but the system will power them at the higher voltage.
- Do not mix RDIMMs, LRDIMMs, and UDIMMs.
- DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the memory type and number of installed processors.
- HP memory from previous generation servers is not qualified on the DL380e Gen8 Server. Certain HP SmartMemory features such as memory authentication and enhanced performance may not be supported.
- To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html.
- For memory population rules and additional memory guidelines, please see the DL380e Gen8 user guide at
http://www.hp.com/support.

## Memory

- There are three(3) Memory channels per processor; six(6) channels for 2 processors server.
- There are two(2) DIMM slots for each memory channel; twelve(12) total slots for 2 processors server.

Intel Gen8 Supported Memory Bandwidth for HP ProLiant Gen8 Intel® Xeon®E5-2400v2 Series Processor Family

**Memory Bandwidth and Capacity**

| DIMM Type | Registered DIMMS (RDIMMs) | | | | Load Reduced (LRDIMMs) | Unbuffered with ECC DIMMs (UDIMMs) | | |
|---|---|---|---|---|---|---|---|---|
| DIMM Rank | Single Rank | Dual Rank | Single Rank | Dual Rank | Quad Rank (4R) | Single Rank | Dual Rank | Dual Rank |
| DIMM Capacity | 4GB | 8GB | 8GB | 16GB | 32GB | 2GB | 4GB | 8GB |
| DIMM Native Speed (MT/s) | 1600 | 1600 | 1600 | 1600 | 1333 | 1600 | 1600 | 1600 |
| Voltage | LV | LV | Std | LV | Std | LV | LV | LV |
| | | | | | | | | |
| **SLOTS THAT CAN BE POPULATED** | | | | | | | | |
| 12 slot servers | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| | | | | | | | | |
| **MAXIMUM CAPACITY (GB)*** | | | | | | | | |
| | 48 | 96 | 96 | 192 | 384 | 24 | 48 | 96 |
| | | | | | | | | |
| 1 DIMM Per Channel | 1600 | 1600 | 1600 | 1600 | 1333 | 1600 | 1600 | 1600 |
| 2 DIMM Per Channel | 1600 | 1600 | 1600 | 1600 | 1333 | 1600 | 1600 | 1600 |
| 3 DIMM Per Channel | 800 | 800 | 800 | 800 | 1333 | n/a | n/a | n/a |

Intel Gen8 Supported Memory Bandwidth for HP ProLiant Gen8 Intel® Xeon®E5-2400 Series Processor Family

**Memory Bandwidth and Capacity**

| DIMM Type | Registered DIMMS (RDIMMs) | | | | | | | Load Reduced (LRDIMMs) | Unbuffered with ECC DIMMs (UDIMMs) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIMM Rank | Single Rank | Single Rank | Dual Rank | Dual Rank | Single Rank | Dual Rank | Dual Rank | Quad Rank | Single Rank | Single Rank | Dual Rank | Dual Rank | Dual Rank | Dual Rank |
| DIMM Capacity | 4GB | 4GB | 8GB | 8GB | 8GB | 16GB | 16GB | 32GB | 2GB | 2GB | 4GB | 4GB | 8GB | 8GB |
| DIMM Native Speed (MT/s) | 1333 | 1600 | 1333 | 1600 | 1600 | 1333 | 1600 | 1333 | 1333 | 1600 | 1333 | 1600 | 1600 | 1333 |
| Voltage | LV | Std | LV | Std | Std | LV | Std | LV | LV | Std | LV | Std | Std | LV |
| | | | | | | | | | | | | | | |
| **SLOTS THAT CAN BE POPULATED** | | | | | | | | | | | | | | |
| 12 slot servers | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| | | | | | | | | | | | | | | |
| **MAXIMUM CAPACITY (GB)*** | | | | | | | | | | | | | | |
| | 48 | 48 | 96 | 96 | 96 | 192 | 192 | 384 | 24 | 24 | 48 | 48 | 96 | 96 |

## Memory

| 1 DIMM Per Channel | 1333 | 1600 | 1333 | 1600 | 1600 | 1333 | 1600 | 1333*** | 1333 | 1600 | 1333 | 1600 | 1600 | 1333 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 DIMM Per Channel | 1333 | 1600 | 1333 | 1600 | 1600 | 1333 | 1600 | 1333*** | 1333*** | 1600 | 1333*** | 1600 | 1600 | 1333*** |
| 3 DIMM Per Channel | 1066 | 1333*** | 1066** | 1333** | 1333** | 1066** | 1333** | 1600 | n/a | n/a | n/a | n/a | n/a | n/a |

*Maximum capacity will vary based on individual server platform qualification schedule
**LRDIMM enables 2 DIMMs per channel. HP SmartMemory supports up to 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5V.
*** For UDIMMs, HP SmartMemory supports 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5V.

**DIMM slot and configuration diagrams**
**Basic memory slot & population diagram**

- Population order; looking from the front of your server CPU#1 is on right side and CPU#2 is on the left. See the population order by alphabetic and numeric progression below

| CPU #1 IS PROCESSOR ON RIGHT - LOOKING FROM FRONT OF SERVER | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **CPU 1** | | | **CPU 2** | | | |
| | Slot # | population order | | Slot # | population order | | **CPU 1** |
| Chnl 1 | 1 | A | 1 | 1 | A | 1 | |
| | 2 | D | 4 | 2 | D | 4 | |

| | **CPU 1** | | | **CPU 2** | | | |
|---|---|---|---|---|---|---|---|
| | Slot # | population order | | Slot # | population order | | **CPU 2** |
| Chnl 2 | 3 | B | 2 | 3 | B | 2 | |
| | 4 | E | 5 | 4 | E | 5 | |

| | **CPU 1** | | | **CPU 2** | | | |
|---|---|---|---|---|---|---|---|
| | Slot # | population order | | Slot # | population order | | **CPU 3** |
| Chnl 3 | 5 | C | 3 | 5 | C | 3 | |
| | 6 | F | 6 | 6 | F | 6 | |

**Memory Speed by Processor Model**

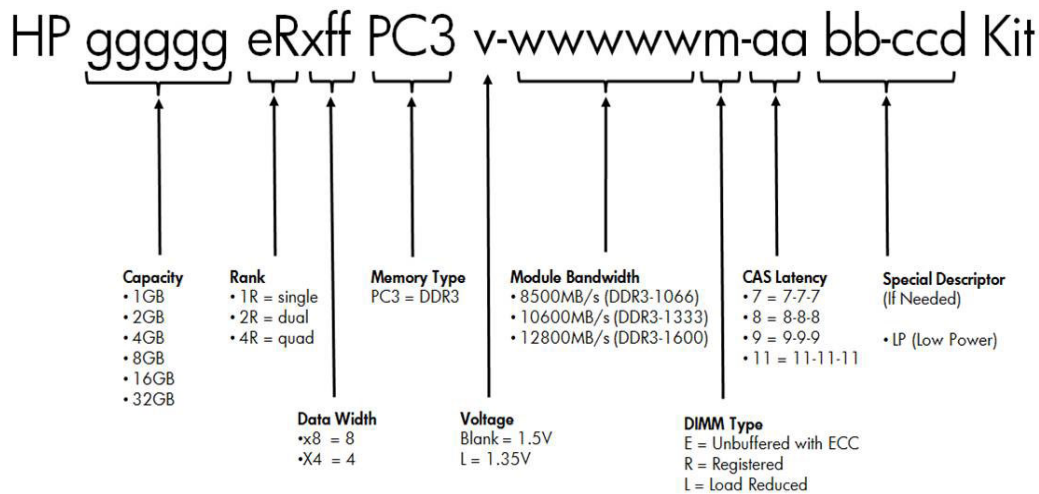| Processor Models | Supported Memory Speeds |
|---|---|
| E5-2470, E5-2450, | 1600/1333/1066MHz |
| E5-2440, E5-2430, E5-2420, E5-2450L, | 1333/1066MHz |
| E5-2407, E5-2403, E5-2430L, | 1066MHz |
| E5-2430v2, E5-2430Lv2, E5-2420v2, E5-2440v2, E5-2450v2, E5-2470v2, E5-2450Lv2, | 1600/1333/1066MHz |
| E5-2407v2, E5-2403v2, | 1333/1066MHz |

**Standard and Maximum Memory Capacity (Pre-configured Models)**

## Memory

| Pre Configured Models | Standard Memory | Maximum Memory Plus Optional Memory | Standard Memory Replaced with Optional Memory |
|---|---|---|---|
| E5-2403v2, E5-2403, E5-2403, | 4GB (1x4GB) | 180GB (11x16GB, 1x4GB) | 384GB (12x32GB) |
| E5-2407v2, E5-2407v2, | 8GB (1x8GB) | 184GB (11x16GB, 1x8GB) | 384GB (12x32GB) |
| E5-2407, E5-2407, | 8GB (2x4GB) | 168GB (10x16GB, 2x4GB) | 384GB (12x32GB) |
| E5-2450, | 24GB (6x4GB) | 120GB (6x16GB, 6x4GB) | 384GB (12x32GB) |
| E5-2420v2, E5-2420, E5-2420v2, E5-2420, | 12GB (3x4GB) | 156GB (9x16GB, 3x4GB) | 384GB (12x32GB) |

**DDR3 memory options part number decoder**

**NOTE:** Capacity references are rounded to the common Gigabyte values.

- 1GB = 1024MB
- 2GB = 2048MB
- 4GB = 4096MB
- 8GB = 8192MB
- 16GB = 16384MB
- 32GB = 32768MB



HP ggggg eRxff PC3 v-wwwwwm-aa bb-ccd Kit

**Capacity**
- 1GB
- 2GB
- 4GB
- 8GB
- 16GB
- 32GB

**Rank**
- 1R = single
- 2R = dual
- 4R = quad

**Data Width**
- x8 = 8
- X4 = 4

**Memory Type**
PC3 = DDR3

**Voltage**
Blank = 1.5V
L = 1.35V

**Module Bandwidth**
- 8500MB/s (DDR3-1066)
- 10600MB/s (DDR3-1333)
- 12800MB/s (DDR3-1600)

**DIMM Type**
E = Unbuffered with ECC
R = Registered
L = Load Reduced

**CAS Latency**
- 7 = 7-7-7
- 8 = 8-8-8
- 9 = 9-9-9
- 11 = 11-11-11

**Special Descriptor**
(If Needed)
- LP (Low Power)

| HP Memory | **NOTE:** To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/14225_na/14225_na.html |
|---|---|

**NOTE:** HP memory from previous generation servers are not fully compatible with the DL360e Gen8 Server.

**Registered DIMMs (RDIMMs)**

| | |
|---|---|
| HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713981-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713983-B21 |

## Memory

| | |
|---|---|
| HP 8GB (1x8GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 731765-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit | 713985-B21 |
| **NOTE:** The above memory is supported by the E5-2400 v2 series Processors. | |
| HP 4GB (1x4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647893-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647895-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647897-B21 |
| HP 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 647899-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 690802-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit | 647901-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 672631-B21 |
| **NOTE:** The above memory is supported by the E5-2400 series Processors. | |

**Unbuffered with ECC DIMMs (UDIMM)**

| | |
|---|---|
| HP 2GB (1x2GB) Single Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713975-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713977-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-12800E (DDR3-1600) Unbuffered CAS-11 Low Voltage Memory Kit | 713979-B21 |
| **NOTE:** The above memory is supported by the E5-2400 v2 series Processors. | |
| HP 2GB (1x2GB) Single Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669320-B21 |
| HP 2GB (1x2GB) Single Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647905-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669322-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647907-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit | 669324-B21 |
| HP 8GB (1x8GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit | 647909-B21 |
| **NOTE:** The above memory is supported by the E5-2400 series Processors. | |

**Load Reduced DIMMs (LRDIMMs)**

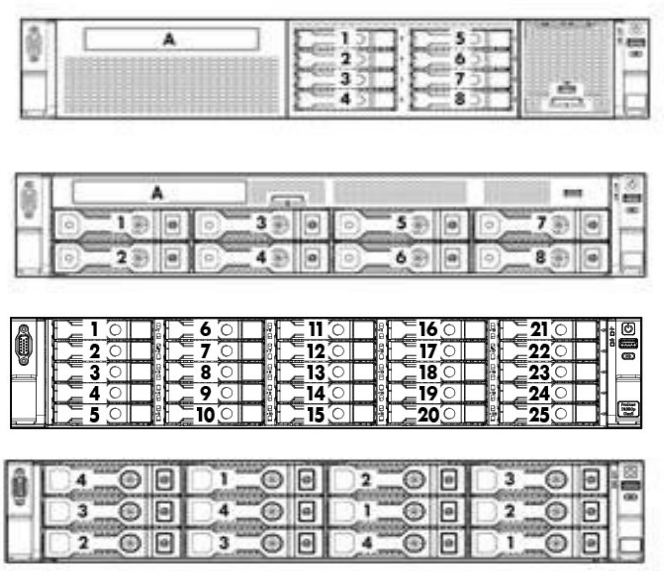| | |
|---|---|
| HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit | 647903-B21 |

## Memory

**NOTE:** The above memory is supported by the E5-2400 v2 and E5-2400 series Processors.

**NOTE:** All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator.

**NOTE:** PC3L is a low voltage memory.

## Storage

| | |
|---|---|
| A | Optical Media Bay optional |
| 1-8 | 8 x SFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays |
| A | Optical Media Bay optional |
| 1-8 | 8 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays |
| 1-25 | 25 x SFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays |
| 1-4 | 12 x LFF (1:1) SATA/SAS/SDD Hot Pluggable Hard drive bays with point to point backplane |

**Maximum Storage Capacity** - (with D2700)

| | |
|---|---|
| Internal (25 SFF Drive Cage) | 32.4TB (27 x 1.2TB SAS/SATA SFF with 25SFF drive cage + Rear 2SFF drive cage) |
| Internal (12 LFF Drive Cage) | 56TB (14 x 4TB SAS/SATA LFF with 12LFF drive cage + Rear 2LFF drive cage) |
| External | 240TB (200 x 1.2TB SAS SFF) |
| Total (25 SFF Drive) | 272.4TB |
| Total (12 LFF Drive) | 296TB |

## Technical Specifications

| System Unit | **Dimensions** (with bezel) | | SFF Drives: 3.44 x 17.54 x 27.5 in (8.75 x 44.55 x 69.85 cm)<br>LFF Drives: 3.44 x 17.54 x 29.5 in (8.75 x 44.55 x 74.94 cm) |
|---|---|---|---|
| | **Weight** (approximate) | Maximum | 71.20 lb (32.30 kg) |
| | | Minimum | 30.80 lb (14.00 kg) |
| | **Input Requirements** | Rated Line Voltage | 100 to 120 VAC<br>200 to 240 VAC |
| | | Rated Input Current | For 1200 W Power Supply:<br>10 A (at 100 VAC),<br>4.9 A (at 200 VAC)<br>For 750 W Power Supply:<br>8.9 A (at 100 VAC),<br>4.3 A (at 200 VAC)<br>For 460 W Power Supply:<br>5.5 A (at 100 VAC),<br>2.6 A (at 200 VAC) |
| | | Rated Input Frequency | 50 to 60 Hz |
| | | Rated Input Power | For 1200 W Power Supply:<br>930 W (at 100 VAC),<br>1348 W (at 200 VAC)<br>For 750 W Power Supply:<br>857 W (at 100 VAC),<br>824 W (at 200 VAC)<br>For 460 W Power Supply:<br>526 W (at 100 VAC),<br>505 W (at 200 VAC) |
| | **BTU Rating** | Maximum | For 1200 W Power Supply:<br>3530 BTU/hr (at 100 VAC),<br>4600 BTU/hr (at 200 VAC)<br>For 750 W Power Supply:<br>2925 BTU/hr (at 100 VAC),<br>2812 BTU/hr (at 200 VAC)<br>For 460 W Power Supply:<br>1794 BTU/hr (at 100 VAC),<br>1725 BTU/hr (at 200 VAC) |
| | **Power Supply Output** (per power supply) | Rated Steady-State Power | For 1200 W Power Supply:<br>800 W (at 100 VAC),<br>900 W (at 120 VAC),<br>1200 W (at 200 to 240 VAC)<br>For 750 W Power Supply:<br>750 W (at 100 to 120 VAC),<br>750 W (at 200 to 240 VAC)<br>For 460 W Power Supply:<br>460 W (at 100 to 120 VAC),<br>460 W (at 200 to 240 VAC) |
| | | Maximum Peak Power | For 1200 W Power Supply:<br>800 W (at 100 VAC),<br>900 W (at 120 VAC),<br>1200 W (at 200 to 240 VAC) |

## Technical Specifications

|  |  |  |
| --- | --- | --- |
|  |  | For 750 W Power Supply:<br>750 W (at 100 to 120 VAC),<br>750 W (at 200 to 240 VAC)<br>For 460 W Power Supply:<br>460 W (at 100 to 120 VAC),<br>460 W (at 200 to 240 VAC) |
| **System Inlet Temperature** | Operating | 10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F). |
|  | Non-operating | -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr). |
| **Relative Humidity** (non-condensing) | Operating | 10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing. |
|  | Non-operating | 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing. |
| **Altitude** | Operating | 3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
|  | Non-operating | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| **Acoustic Noise** |  | Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). |

| Idle |  | 1P Non- Redundant SKU | 2P Redundant SKU |
| --- | --- | --- | --- |
|  | LWAd | 5.8 B | 5.4 B |
|  | LpAm | 41 dBA | 38 dBA |
| **Operating** |  | **1P SKU** | **2P SKU** |
|  | LWAd | 5.9 B | 5.7 B |
|  | LpAm | 42 dBA | 41 dBA |

**NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

| **Emissions Classification** | FCC Rating | Class A |
| --- | --- | --- |

## Technical Specifications

| | | |
|---|---|---|
| **(EMC)** | Normative Standards | CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS14336-1; CNS13438; GB4943; GB9254; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1 |

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
**NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

| | | |
|---|---|---|
| **HP Dynamic Smart Array B120i Controller** | **Dimensions** | Embedded |
| | **Disk Drive and Enclosure Interface - Transfer rate** | Up to 6Gb/s SATA (Serial ATA) |
| | **SAS Connectors** | 6 internal SATA connectors |
| | **Server Interface** | x4 PCIe 2.0 |
| | **SAS Speed** | 6Gb/s SATA links |
| | **Cache Memory** | Zero Memory RAID has no cache memory |
| | **Logical Drives Supported** | Up to 8 logical volumes (6 physical drives) |
| | **Host Memory Addressing** | 64-bit, supporting greater than 4GB server memory space |
| | **Hot Plug Support** | Yes |
| | **RAID Support** | RAID 0 (Striping), RAID 1 (Mirroring) |
| | | RAID 1+0 (Striping & Mirroring) |

| | | |
|---|---|---|
| **HP Dynamic Smart Array B320i Controller** | **Dimensions** | Embedded |
| | **Disk Drive and Enclosure Interface - Transfer rate** | Up to 6Gb/s SATA (Serial ATA) |
| | **SAS Connectors** | 2 internal x4 connectors |
| | **Server Interface** | x4 PCIe 2.0 |
| | **SAS Speed** | 6Gb/s SAS links |
| | **Cache Memory** | Zero Memory RAID has no cache memory<br>optional 40-bit 512MB ECC protected Flash Backed Write Cache (FBWC) |
| | **Logical Drives Supported** | Zero Memory, Up to 2 logical volumes (6 physical drives) |
| | **Host Memory Addressing** | 64-bit, supporting greater than 4GB server memory space |
| | **RAID Support** | RAID 0 (Striping), RAID 1 (Mirroring) |
| | | RAID 1+0 (Striping & Mirroring) |
| | | RAID 5 with optional 512MB FBWC |

**NOTE:** 512 MB cache is required to enable RAID 5 support.
**NOTE:** NO SAS supported.

## Technical Specifications

| **HP Smart Array P420 Controller** | **Dimensions** | Low Profile PCIe Form Factor |
|---|---|---|
| | **Disk Drive and Enclosure Interface - transfer rate** | 6Gb/s SAS (Serial Attached SCSI) |
| | | 3Gb/s SATA (Serial ATA) |
| | **SAS Connectors** | 2 internal 4X connectors |
| | **Cache Memory Speed** | DDR2-800MHz with 40 or 72-bit wide bus |
| | **Server Interface** | x4 PCIe 2.0 provides 2GB/s maximum bandwidth |
| | **SAS Speed** | 8 6Gb/s SAS links provide 4.8GB/s maximum bandwidth |
| | **Cache Memory** | Zero Memory RAID has no cache memory |
| | | 40-bit 256MB ECC protected cache (battery upgrade available) |
| | | 72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC |
| | | Zero Memory, Up to 2 logical volumes (8 physical drives) |
| | **Logical Drives Supported** | Up to 64 logical drives with cache |
| | **Host Memory Addressing** | 64-bit, supporting greater than 4GB server memory space |
| | **RAID Support** | RAID 6, 60 (Advanced Data Guarding) |
| | | RAID 5, 50 (Distributed Data Guarding) |
| | | **NOTE:** Either a minimum of 256MB cache and battery kit or a minimum of 512MB BBWC/FBWC is required to enable RAID 5, 50, 6, 60. |
| | | **NOTE:** HP Smart Array Advanced Pack (SAAP 2.0) is no longer required to enable 6 & 60 (Advanced Data Guarding). However, controller must be in firmware version 4.68 (or later). |
| | | RAID 1+0 (Striping & Mirroring) |

| **HP Ethernet 1Gb 4-port 366i Adapter** | **Network Interface** | 10Base-T/100Base-TX/1000Base-TX | |
|---|---|---|---|
| | **Compatibility** | EEE 802.3 10Base-T | |
| | | IEEE 802.3ab 1000Base-T | |
| | | IEEE 802.3u 100Base-TX | |
| | | IEEE 1588, IEEE 802.1AS | |
| | | IEEE 802.3az - Energy Efficient Ethernet (EEE) | |
| | **Data Transfer Method** | PCI Express v 2.0, 5.0 GT/s, two lanes (x2) | |
| | **Controller** | Intel I350 Powerville | |
| | **Network Transfer Rate** | 10Base-T (Half-Duplex) | 10 Mb/s per port, 40 Mb/s combined |
| | | 10Base-T (Full-Duplex) | 20 Mb/s per port , 80 Mb/s combined |
| | | 100Base-TX (Half-Duplex) | 100 Mb/s per port, 400 Mb/s combine |
| | | 100Base-TX (Full-Duplex) | 200 Mb/s per port, 800 Mb/s combined |
| | | 1000Base-TX (Half and Full-Duplex) | 1000Mb/s per port, 4000 Mb/s combined |
| | **Connector** | Two RJ-45 | |
| | **Cable Support** | 10Base-T | Categories 3, 4 or 5 UTP; up to 328 ft (100 m) |
| | | 10/100/1000Base-TX | Category 5 or higher UTP; up to 328 ft (100 m) |

## Technical Specifications

| Environment-friendly Products and Approach | End-of-life Management and Recycling | Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.<br><br>The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. |
|---|---|---|

For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.